

## ROMANIAN GREY STEPPE CATTLE: A NATIONAL TRESOR IN DANGER OF EXTINCTION. EMBRYO TRANSFER TECHNOLOGY: A TOOL TO AVOID THIS

Bâlțeanu V. A., A.Vlaic, Anda Rusu, V.Cighi, D. Ciupercescu, P. Coroi, F.Criste, V.Costea

University of Agricultural Sciences and Veterinary Medicine, Faculty of Animal Husbandry and Biotechnology, 3-5 Manastur street, 400372, Cluj – Napoca, Romania, email: [a.balțeanu@lycos.com](mailto:a.balțeanu@lycos.com)

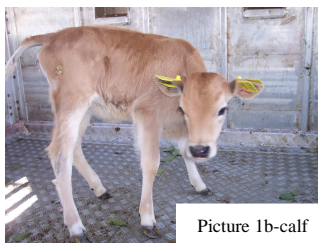
Key words: Romanian Grey Steppe Cattle, embryo transfer, cloning, natural reserve

### SUMMARY

Romanian Grey Steppe Cattle is a very old local cattle breed very well adapted to harsh environment and very resistant to diseases. The breed was selected directly from *Bos primigenius* (so called bour in Romanian). The presence of *Bos primigenius* and their domesticated relatives, living in this area, is proven also by the documents from the 14-15 centuries. The head of the bour was the symbol marked on the flag of the Moldavian region, in the time of Stefan the Great. There were many varieties of this breed, spread all over Romanian regions and neighbouring countries, before the Second World War. At that time they were used as traction animals, the meat of the bulls being much appreciated on the European market. After the war, the breed was condemned in Romania to disappearance (1) due to absorption with European breeds, more appropriate for milk and meat production. The Transylvanian variety was the tallest and heavier of all, with long horns. This variety is now extinct in this area, but it contributed to the formation of Hungarian Grey Steppe Cattle. The Dobrogea variety was spread mostly in the Danube Delta. It was the smallest variety from Romania and with shorter horns, very well adapted to the harsh conditions. There are a few individuals left from this variety in the Danube Delta. The Moldavian variety was the most spread and typical from all varieties with a medium sized horns and medium weight. There are just a few pure breed individuals left in Romania, belonging to the Moldavian variety, six of them (bought in September 2006): 3 cows, 2 bulls and 1 calf are in our University property (Picture 1 a, b, c). Using the embryo transfer technology (*in vitro* and *in vivo* embryo production and cloning) (2), our goals are: to obtain a bigger population and to make a bank of embryos, sperm and fibroblasts, to avoid the extinction of this valuable breed. Our intention is to create a natural reserve in order to breed them in free conditions (or with minimum human intervention), due to the rusticity and adaptability of the breed. Being a part of our national history we think that saving this breed from extinction is in our benefit and in the benefit of the international genetic heritage.



Picture 1a- cow



Picture 1b-calf



Picture 1c-young bull

1. Ciupercescu, D. D., Morar, R., 1982. Genotype conservation of the Grey Cattle is an upmost necessity. 1.The present situation of the Grey Cattle in Romania. Symp. 29-30 Oct. 1982, Cluj-Napoca, 7, 403-408
2. Colleau J.J., Heyman Y., Renard J.P., 1998. Les biotechnologies de la reproduction chez les bovins et leurs applications réelles ou potentielles en sélection. INRA Prod. Anim., 11, 41-56.