

ACTUAL SITUATION AND PROBLEMS IN CONSERVATION POLICY  
AND PRACTICE IN SOUTH AMERICA

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In the developed countries, most of them located in the temperate regions, the selection conducted for centuries by breeders and researchers, together with a recent application of modern technologies, originated breeds with high production levels. The increasing need for animal products in the developing countries, mostly located in the intertropical zone, is causing a quick substitution of the "local" breeds. Even though these "local" breeds present lower production levels than the exotic ones, they are extremely well adapted to the tropics, where they have been naturally selected for centuries. In many cases, it has been observed that the replacement of "local" by exotic breeds has led to very disadvantageous situations, due to the lack of adaptation of the latter to the tropics. In general, well planned crossbreeding programmes are much more appropriate than the upgrading of the "local" breeds with those selected for the temperate zones.

The subject of animal conservation is relatively new in South America. However, this quick substitution of "local" by exotic, less adapted, breeds has just recently awakened the consciousness of breeders and researchers that do not want to witness their complete disappearance.

The establishment of programmes for preservation of livestock breeds in danger of extinction are a must in order to avoid their imminent disappearance. Some Latin American countries have already created their programmes, such as the Brazilian National Programme for Animal Genetic Resources; the Criollo Project developed by CIAT and British Tropical Agricultural Mission in Bolivia; the Criollo Yacumeño Programme, also in Bolivia; the Argentine Criollo cattle project in Argentina, the Colombian Programme, the Calabozo Project in Venezuela, among others. Peru also has an important program, dealing with camelids.

Most of the preservation being done in South America refers to criollo cattle, as shown in one FAO publication: "Recursos Genéticos Animales in America Latina" published in 1981, where of 13 papers, 8 described criollo cattle, 3 described native species, 1 presented methodology, while only 1 presented results of 2 other livestock species: sheep and goats.

As stated before, in South America most of the species and/or breeds of the criollo type have disappeared or are in danger of extinction. Until recently, there was almost no interest in their conservation. It seems that, finally, there is a sign of awareness of many South American countries in terms of recognition of the importance of the conservation of animal genetic resources.

The biggest problem faced by the researchers involved with animal conservation in South America is the lack of funds for their research, not only because this field of study is recent in this continent but also due to the enormous economic problems that South America is passing through. There are no private foundations sponsoring research and/or conservation as in other continents, but all of them are government owned.

Fortunately, in 1987, the Food and Agriculture Organization of the United Nations (FAO) decided to create seven Regional Animal Gene Banks in the developing countries, two in South America (Argentina and Brazil), and the other five in Mexico (for Central America and the Caribbean), Asia, Africa (India and China). Looking for a place to establish the Gene Bank in Brazil, FAO decided to indicate EMBRAPA/CENARGEN, located in Brasilia, due to the work this Centre has already done in this area. It is expected that this Gene Bank will open at the beginning of 1990, receiving semen and embryos from all over the continent, with a duplicate being sent to INTA-Argentina for safety reasons. With simultaneous efforts by FAO, EMBRAPA and INTA, the chances of organizing a strong Regional Animal Gene Bank for South America are much greater, and consequently the chances of preserving many of the endangered breeds of this continent are also increased.

The fast growing science of Biotechnology may lead to new techniques of gene preservation. DNA recombinant techniques, embryo manipulation, cloning of desirable genes from the same or other breed populations may one day become commonplace. We do believe that all doubts that may persist about the importance of the conservation of animal genetic resources will disappear when we think about the future use of just one particular technique: the formation of transgenic animals. The Gene Banks will play an important role when the desirable genes, responsible for characteristics such as adaptation, heat tolerance and resistance to parasites, will be utilized in the formation of such animals. And then only the countries which have started serious conservation programmes will be able to form the transgenic animals that will meet their specific needs. It will be too late for some countries to start. The time is now, before most of the "local" breeds disappear due to systematic crossbreeding programmes with exotic breeds.

The South American researchers working with animal conservation sincerely hope that this Animal Gene Bank Project created by FAO can meet with expectations engendered by the actual situation of animal conservation and become common practice in the near future in South America.