

EDITORIAL

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The successful improvement of pig productivity in the developed world has resulted in intensive use of a relatively small number of breeds. Whilst these practices have provided for the high quality protein needs of the human diet in the last 50 years it has had a detrimental effect on genetic variation. This reliance on these improved breeds has had a significant impact on more traditional or local breeds. Herd sizes have fallen, resulting in the potential loss of the breed or loss of distinctiveness through crossbreeding in attempts to sustain such populations. Even so there are still a large number of breeds present in Europe as well as the rest of the world. Efforts of the FAO and Rare Breeds International are beginning to reverse this trend (for example since the formation of the RBST in 1973 in the UK none of the registered breeds has been lost). Today circumstances have changed and new challenges have appeared in pig production such as environmental protection, food safety and animal welfare. These changing consumer demands are resulting in a greater diversity of quality products and also encourage methods of production that are more suited to some of the local breeds that are still found within Europe. In addition, geneticists (in both academia and industry) are recognizing the importance of maintaining breed diversity in order to conserve important genes related to quality, adaptation and reproduction traits that breeders can use to respond to the changing demands of the market place. This economic point of view together with other arguments such as the historical role of these populations, the environmental repercussions and the social impact, have created in the last five years a special interest in the study of the world pig biodiversity, especially in the European Union. During this time DNA markers became readily available to provide a better measure of genetic distances in populations. Several projects have been developed on this subject at both the national and the international level but there was a need for an event to report and discuss the major results and findings on the detection, characterization, conservation and utilization of Pig Genetic Diversity.

Arch. Zootec. 52: 127-128. 2003.

This volume presents the proceedings of the Symposium on Pig Biodiversity, which was held in the Spanish city of Córdoba during 7-9th November 2002, organised to review the state of the art in the field. More than fifty researchers from 16 countries (France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, UK, Argentina, Brazil, Mexico, Nicaragua, Peru, Uruguay and USA) participated in the event. The papers represent two types of contribution made at the Symposium; firstly the main papers developed from the EC funded project *CHARACTERISATION OF GENETIC VARIATION IN THE EUROPEAN PIG TO FACILITATE THE MAINTENANCE AND EXPLOITATION OF BIODIVERSITY* (PIGBIODIV I) in subjects of general interest such as the technical aspects of sampling, AFLP and microsatellite marker genotyping, the statistical analysis of genetic profiles and calculation of genetic distance; the organization, presentation and dissemination of data; and also the legal aspects of the intellectual property of the genetic material and its associated information. Then the second part consists of specific contributions from different initiatives looking at local breeds or related issues, in the format of short communications.

A total of 15 countries are represented by contributions to these proceedings with important papers developed in cooperation or individually. We consider that this represents a reference point for the future for all scientists, industry, NGOs and the National and International official institutions who desire to work in the new frontiers of pig production.

We must highlight the outstanding role played by Dr. Louis Ollivier, from INRA (France), who coordinated two of the most important international projects developed in this subject. He has given a strong stimulus to all researchers investigating pig biodiversity, and without his leadership, support and dedication the PigBioDiv I project would not have been such a great success. The relevance of the methodology employed, and the results obtained, stimulated the European Union to fund a second project (PIGBIODIV II) centered in the exploration of the genetic diversity of Asian pig breeds and comparison with European breeds. The aims and objectives of this project were also presented in the Symposium and are described here.

Sincere thanks are made to those organizations supporting the Symposium: Pig Improvement Company (PIC) who contributed to the science and also in the organization of the event. We must not forget the support of the CYTED Program (Programa Iberoamericano de Ciencia y Tecnología para el Desarrollo) enabling the participation and presentation of results of researchers from Latin America. The Spanish Institute of Agricultural Research (INIA) contributed to the funding of this publication. The University of Córdoba, and especially the Provincial Government of Córdoba (Diputación de Córdoba) who gave enthusiastic and essential support to the development of this meeting. Once again we acknowledge Louis Ollivier for his enthusiastic inputs to the development and implementation of the meeting. Finally, we would like to thank all of the participants for contributing to a successful Symposium and what we hope is a valuable record of the event.