

University of Camerino: Research and extension programmes on fine fibre producing animals

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Three departments of the University of Camerino are involved in the research and extension programmes on fine fibre producing animals; the Faculty of Veterinary Medicine, with the specialisation on Animal Anatomy and Histology, Genetics, and Breeding, the Department of Chemistry, and the Department of Botany. The research activities are focused in two sections:

- 1) Biology and genetics of mammalian pigmentation;
- 2) Use of “natural” (vegetable) dyes.

The research on mammalian pigmentation includes the biological description of pigmented phenotypes at the chemical, cellular and intracellular levels; the interpretation of segregations at phenotypic and genetic levels; the identification of genes. Sheep and alpaca are the species at present investigated. Scientific collaborations exist with the Laboratoire de Génétique Factorielle, INRA, France (Prof J.J. Lauvergne), the Laboratoire de Recherche sur les Tumeurs, INSERM, Rothschild Foundation, France (Dr J.P. Cesarini); Dip. INN-BIOAG, ENEA, Italy (Dr S. Misiti).

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Research on vegetable sources of natural dyes includes the use of marginal lands for new cultivars (*Isatis tictoria*, broom, etc.), the extraction of dyes by plants

and the use of dyes on full white wool and mohair. Monti Sibillini National Park is involved in the programme. The University of Camerino is involved in a five year (1996-2000) extension project funded by EC ("Obiettivo 5b") and managed by the Marche Region "Ecological animal and vegetal fibres", sub-project "Ecological Animal Fibres Production".

The sub-project is based on a) production of black, moorit and grey wool, b) introduction and adaptation of Angora goats. Black, moorit and grey sheep will be obtained by a cross and paternal back-cross reproductive scheme involving full white Italian merino-based ewes (Sopravissana and/or Gentile di Puglia pure animals or crosses) and homozygous Australian and New Zealand coloured merino rams. Five or six founder nuclei will be created in agri-tourism farms, farmer's co-operatives and communities for the rehabilitation of drug addicts. A circular mating programme of reproduction will be applied to minimise the inbreeding (Coloured wool will be processed in a worsted cycle. Five or six groups of Angora goats will be bred in the same founder farms; the hair will be dyed with natural "dyes" and mixed up with the coloured wool in different proportions. Specific knitted garments and a special quality trade mark will be prepared by the CTA ("Consorzio tessile abbigliamento"), a pool of about 200 textile manufactures on the Marche Region.