

A COOPERATION PROGRAMME IN HIGHER EDUCATION TO IMPROVE LIVESTOCK PRODUCTIONS, FOOD SECURITY AND ENVIRONMENTAL SUSTAINABILITY IN THE SAHEL

Semita C.^[10], Nervo T.^[11], Ferrero E.^[14], Trucchi G.^[14], Calvo A.^[20], Balla A.^[30], Amoukou A.I.^[31], Zoungrana Kabore C.Y.^[51], Toguyeni A.^[51], Issa Y.^[61]

^[11]Dipartimento di Scienze Veterinarie - Università degli Studi di Torino ~ Torino, ^[10]Dipartimento di Scienze Agrarie, Forestali e Alimentari - Università degli Studi di Torino ~ Torino, ^[18]CRESA - Faculté d'Agronomie - Université Abdou Moumouni de Niamey ~ Niamey, ^[14]CISAO (Centro Interdipartimentale di Ricerca e Cooperazione Tecnico Scientifica con i Paesi del Sahel e dell'Africa Occidentale) - Università degli Studi di Torino ~ Torino, ^[31]LERNSE (Laboratoire d'Études des Ressources Naturelles et des Sciences de l'Environnement) - Université Polytechnique de Bobo Dioulassa ~ Bobo Dioulassa, ^[61]IUSTA (Institut Universitaire de Sciences et Technologies d'Abéché) ~ Abéché

In order to increase agriculture, driver for economic growth in Sub-Saharan Africa, a trained cadre who is technologically competent and able to manage natural resources and improve food security with a multidisciplinary and sustainable approach should be produced. To reach this aim, the CISAO of the University of Turin, established a network with three Sahelian Institutions of Higher Education (HEIs) of Niger, Burkina Faso and Tchad, to lead the project "Réseau des Universités Sahéliennes pour la Sécurité Alimentaire et la Durabilité Environnementale (RUSSADE)" financed by the ACP-EU Cooperation Programme in Higher Education (EDULINK II).

The project foresees the organization of Master courses to give technical, scientific and methodological bases to the students, allowing them to manage natural resources and to improve agriculture, livestock and food security with a multidisciplinary and sustainable approach, considering both the socio-economic perspectives and the environmental risks.

Innovative teaching strategies will be prepared and proposed in order to connect different themes. Thanks to the innovative procedures of this kind of training, the project recommends measures designed to strengthen the capacity and effectiveness of higher education, to promote basic and applied scientific research and to improve educational quality through updated teaching methodologies.

The first step of the project allows the strengthening of links between HEIs, encouraging the exchange of academic staff and creating a more favourable environment for debate and innovative research to promote a greater awareness of the complex connections between human choices and natural processes. During the Master course, students will not receive technical training but the required expertise to be aware of local issues in agriculture, farming and environmental protection and to suggest and communicate appropriate and sustainable solutions, allowing them to work in key sectors of the region.

An action of this kind may cause a change in mentality: for example, awareness of the links between development and modernization of the rural sector, environmental degradation and poverty should lead to changes in individual behaviour for the maintenance and respect of natural resources.

1. Gilboy A., Flora C., Raphael R., Pathak B. (2000) Agriculture Long-term Training: Assessment and Design Recommendations. Washington, D.C.: USAID.
2. Chakeredza S. et al. (2008) Tailoring tertiary agricultural education for sustainable development in Sub-Saharan Africa: opportunities and challenges. *Sci.Res.Essays*, 3 (8), 326-332.
3. Ayantunde A. A., de Leeuw J., Turner M. D., Said M. (2011) Challenges of assessing the sustainability of (agro) pastoral systems. *Livestock Science*, 139, 30-43

Cooperation in higher education and food security

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