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via Sustainable Agro-food Chains*

PROGRAMME



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## Innovating on agriculture sustainability: Case study of Lis Valley Irrigation District, Portugal

**Martins Lorena de Oliveira Maria de Fátima**, Instituto Politécnico de Coimbra, Escola Superior Agrária, CERNAS

Damásio Henrique, Manager of Associação de Regantes e Beneficiários do Vale do Lis  
Castro Francisco, Head of Division in Direção Regional de Agricultura e Pescas do Centro  
Teixeira Margarida Maria, Head of the Leiria Delegation of Direção Regional de Agricultura e Pescas do Centro

Gonçalves José Manuel, Instituto Politécnico de Coimbra, Escola Superior Agrária

The innovation of the agricultural systems management is a determinant factor to guarantee the adaptation to the new paradigm of global economy, environmental protection and social requirements. In Programs of Operational Groups (OG) (EIP-AGRI, 2015) the definition of innovation criterion was assigned to the innovation factor the product innovation and process innovation. Product innovation is defined as the introduction of a new product on the market and process innovation through the implementation of a new or improved production method, practice or improved process. In the methodology of the global value of the project were hierarchized several variables. In the variable of the quality of the project plan and in the area of innovation typology was assigned a higher score for the innovation factor, the product and process innovation that the project offered. The innovation of the processes, particularly of the complex systems, like the irrigation districts management, is not always easy to understand and includes several actors. This paper focus this aspects of the innovation, developing a new process to manage the water and other factors that requires a set measures interconnected with the collective infrastructures, aligned with the European Innovation Partnership for Agricultural productivity and Sustainability that contributed to the European Union's strategy of research and innovation with the OG Programs 2) The Lis Valley Irrigation District dated from 1957, managed by the Lis Water Users Association with 2000 ha is a small but important agricultural area of the Center of Portugal, to grow namely, corn grain, rice, horticultural crops, orchards, and forage. The national government is planning the rehabilitation of the water distribution network to reduce the water losses, improve management and the agricultural competitiveness. 3) An OG has been created to improve: irrigation management, competitiveness and environmental quality through monitoring and experimentation actions. This project aims an innovation process following up several advances of knowledge quantified by the network performance indicators, such as: energy efficiency; irrigation and drainage; water quality; mapping of crops and water use conditions; economic indicators; operational water demand and distribution plans. It focus is the system management of water and soil in the plot by the individual farmers, and for the creation of a dynamic knowledge extension of the association for farmers. The research and experimental tasks are innovative, highlighting the assessment of ecotoxicological risks and experimentation of mitigation measures by the farmer; operation of irrigation warnings based on observations and local parameterization; testing and field evaluation on new irrigation and drainage technologies and their interrelation with the collective network; remote sensing cultural mapping and its application of irrigation and drainage management; economic analysis to assess the viability of technologies and receptivity by farmers. This project contributes to the rise to products and practices with wide and global dissemination to potential beneficiary, take in consideration that the agri-food development as economic strategic sector for Portuguese exports. The agri-food exports grew of 8% (three-year average) higher than Portuguese exports that grew of 5%. A socio-economic impact that goes to meet the agro-system sustainability.