

Self-sufficiency is key to explain economic sustainability of sheep farming in marginal areas

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In the Euro-Mediterranean basin many sheep farming systems are located in marginal areas, often considered as High Nature Value (HNV) farmland. The analysis of sustainability of these farming systems involves the consideration of multiple variables and attributes, such as productivity, adaptive capacity or self-reliance, which are key to understand how farms might face changes in the future. Mixed cereal-sheep farms rearing a local breed (Ojinegra, Spain) were analyzed to identify key technical and economical parameters that determine their sustainability. Data regarding farm structure, management, economic and social aspects, were obtained in 2008 through direct interviews to farmers (n=30, total population 41). Principal Components Analysis and Cluster Analysis allowed to identify relationships among variables that explained the diversity of farms, and thereafter to classify them into homogeneous groups. Three main factors, explaining more than 60% of the original variance, were identified: (1) 'feed self-sufficiency'; (2) 'animal productivity'; and (3) 'mixed sheep-cereal orientation'. These factors allowed identifying 4 homogeneous groups of farms. Feed self-sufficiency and reliance on natural resources greatly determined the economic profitability of the farms due to lower variable costs (i.e. low feed inputs). Animal productivity allowed for lower dependency on premiums (economic self-sufficiency), and was also related to economic profitability. However, diversity of production (lamb meat-cereals) had no relation with the economic results.