

Adaptation of mixed sheep-crops systems to the socio-economic context in a high natural value area*A.M. Olaizola¹, F. Ameen², V. Silveira³, A. Bernués⁴ and E. Manrique¹*

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Meat sheep farming systems play a central role in the management and conservation of large High Nature Value farmland areas, but have suffered a strong decline in the last few decades in most European Mediterranean regions. In order to evaluate the possible strategies of adaptation to different agricultural policies and off-farm labour scenarios, four representative mixed sheep-crops systems in the 'Sierra y Cañones de Guara' Natural Park (SCGNP) (Spain) were analysed. A mixed linear programming model for each farm system was developed representing the annual operation of the farm distributed into the twelve months of the year. The objective function maximized the farm Gross Margin and the decision variables were land size, land use, flock size, use of agricultural products, use of seasonal rented grazing areas and the possibility to start off-farm activities. Five scenarios combining CAP implementation (partial, total decoupling and absence of subsidies) and the possibility of starting off-farm activities (part-time farming) were considered in the analysis. Results revealed that under the current situation of high cereals prices, the cultivation of barley has economic interest for mixed sheep-crops farming systems of SCGNP. In farms with less labour availability this involved a slight decrease in flock size. Total decoupling of subsidies implied an increasing economic interest of part-time off-farm activities, reducing further flock size (from 21% to 33% or original size) and changing land use (reduction of forage crops). Under the hypothetical scenario of lack of subsidies this trend was strengthened.