Assessing the sustainability of ecological and transition dairy sheep farms in Castilla La Mancha

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Introduction
The methodology MESMIS (Masera et al., 1999) presents a high adaptability to livestock systems, for that reason was used for evaluating the sustainability and establishing comparisons between different categories of ecological and in transition dairy sheep farms in Castilla La Mancha.

Material and methods
The data used were obtained through a survey of a sample of 31 dairy sheep farms of Castilla La Mancha. Questions of technical, economic and social aspects were included. 36 indicators were defined, which represented the attributes of sustainability together with its three dimensions. Indicators were transformed into percentage (Gaspar, 2009) and then they were united in indexes within attributes of adaptability, self-reliance, equity, stability and productivity and within of eco-environmental (M), economic (E) and social (S) dimensions. In both cases, sustainability was evaluated by groups of technical efficiency and stocking rate, taking in each case three categories of farms (low, intermediate and high).

Results and discussion
Sustainability according to stocking rate in the farm
Statistically differences between farms with high, medium and low stocking rate were found in four attributes. Farms with high stocking rate had the worst results in terms of adaptability and the best in terms of self-management. Farms with intermediate stocking rate had the more high score in terms of adaptability, stability and productivity (Fig.3).

Conclusions
The dual dependence on external and internal resources and the balance between use of machinery and labor of farms with intermediate stocking rate, makes that this kind of exploitation present the best performance in terms of overall sustainability.

References