ASSESSING THE SUSTAINABILITY OF ECOLOGICAL AND TRANSITION DAIRY SHEEP FARMS IN CASTILLA LA MANCHA

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Introduction: Agricultural production might be considered sustainable if it is able to satisfy the following objectives: Productivity is maintained in the long run, the resources used are kept of direct or indirect manner, the profitability of production and therefore financial revenues are guaranteed (von Wirén-Lehr, 2001), provides a continuous satisfaction of basic human needs (Yunlong and Smit, 1994). A variety of methods for assessing environmental impacts in agriculture were developed and incorporated into sustainability assessment methodology.

The objective of this work is the adaptation of MESMIS methodology to the assessment of sustainability in dairy sheep farms, establishing comparisons between different categories of farms.

Material and methods: The data used were obtained through a survey of a sample of 31 dairy sheep farms of Castilla La Mancha. Through information obtained were defined 36 indicators, which represented the attributes of sustainability and together with its three dimensions.

Results and discussions: Sustainability according to technical efficiency

Despite the absence of statistical differences significantly between farms (p> 0.05), those with an intermediate level of technical efficiency tended to have the best results in terms adaptability, productivity and stability and the lowest regarding self-reliance. When the results were expressed in relation to the dimensions of sustainability, only statistically significant differences were observed (p < 0.05) for the economic dimension.

Sustainability according to stocking rate in the farm

Farms with high stocking rate have the worst results in terms of adaptability and the best in terms of self-management. On farms with intermediate stocking rate highlights its high score in terms of adaptability, stability and productivity. The best performance in terms of dimensions was obtained on farms with intermediate stocking rate, situation that makes evident the advantages of this type of production.

Conclusions: The absence of differences in categorization according to technical efficiency reflects the extent of production structures, which generates wide variance in indicators, which are not directly correlated with the variable. Statistically significant differences indicated the superiority in the degree of sustainability of production systems semi-intensive dairy sheep, in some of the attributes evaluated as eco-environmental dimension.

Keywords: Sheep, sustainability