OBJECTIVE

To assess the sustainability of Spanish sheep and Welsh beef mixed crop-livestock farming systems

METHODOLOGY

Farm sustainability was evaluated using MESMIS framework. It relies on a systemic approach by the definition of five basic sustainability attributes: (a) Productivity (capacity to provide the required level of goods and services); (b) Stability (the ability of the system to cope with change); (c) Adaptability (the ability to find new levels of balance or to continue offering benefits to long-term changes in the environment); (d) Equity (the ability to distribute both intra- and intergenerational benefits and costs fairly); (e) Self-reliance (the ability to regulate and control interactions with the outside).

RESULTS

Meat sheep farming systems associated to cash crops, mainly cereals

Beef farming systems (and sheep) associated to crops, mostly fodder crops and 40% farms cultivated cereals

CONCLUDING REMARKS

- Mixed sheep farms presented higher levels of self-sufficiency and equity than productivity. In terms of sustainability pillars, the social and economic sustainability was lower than environmental sustainability.
- Beef farming systems obtained higher scores in self-sufficiency and productivity than in the other sustainability attributes. These farms scored lower for social and economic sustainability.
- Mixed farming systems analysed could be more environmentally than socially and economically sustainable.
- Groups of farms that obtained highest productivity were less environmentally sustainable. To achieve higher social and environmental sustainability did not involve lower economic sustainability, i.e. productivity or self-sufficiency mainly.