Quantifying ecosystem services to add value in pasture-based livestock systems

A. Bernués
Centro de Investigación y Tecnología Agroalimentaria de Aragón (CITA), Avda. Montañana 930, 50059, Spain; abernues@gmail.com

Adding value to livestock products is mostly done through intrinsic quality attributes of meat and milk, i.e. those attributes that depend on their chemical and physical characteristics. However, quality perceptions and demands for food products are changing and consumers, and the public at large, increasingly hold 'ethical' concerns about the model of agriculture and the food chain. In this context, the so called extrinsic quality attributes, those that depend on the production process rather than on the product itself (e.g. animal feeding, origin, animal welfare, environmental implications), can constitute an opportunity for market segmentation and consumer-led adding value strategies. The multifunctional landscapes in which local breeds are integrated are characterized by delivering multiple ecosystem services to society (provisioning, regulating, supporting and cultural), however many of these ecosystem services constitute public goods that do not have market price, and therefore farmers do not have incentives to produce them. We first describe the most important ecosystem services linked to grazing agroecosystems in different European regions: (1) the preservation of agricultural landscape (cultural ecosystem services); (2) the conservation of biodiversity (supporting); (3) the prevention of forest fires in Mediterranean conditions, the maintenance of soil fertility in Atlantic conditions and the preservation of water quality in Alpine conditions (regulating); and (4) the provision of specific quality food products linked to the agroecosystems (provisioning). Next, we quantify these ecosystem services with an integrated approach that combines socio-cultural and economic valuation techniques. Finally, we present a conceptual framework for innovative food value chains that aims at linking multifunctional landscapes (and the breeds they hold), the farmers, and the consumers and citizens, using the ecosystem service concept. We operationalize the framework with empirical data of sheep farming systems in Mediterranean Spain.

Book of Abstracts of the 69th Annual Meeting of the European Federation of Animal Science

Dubrovnik, Croatia, 27th – 31st August, 2018

EAAP Scientific Committee:

E. Strandberg
G. Savoini
H.A.M. Spoolder
H. Sauerwein
M. Tichit
M. Klopčič
J. Conington
E.F. Knol
A.S. Santos
T. Veldkamp
I. Halachmi
G.E. Pollott

EAN: 9789086863235
e-EAN: 9789086868711
ISBN: 978-90-8686-323-5
e-ISBN: 978-90-8686-871-1
DOI: 10.3920/978-90-8686-871-1

ISSN 1382-6077

First published, 2018

Wageningen Academic
P u b l i s h e r s