4th AIEAA Conference, Ancona, 11-12 June 2015

Quality and innovation as a strategy of survival of sheep farms in Abruzzo. Results of a direct survey

The sector of sheep farming in the Abruzzo region (Italy) seems to know since more than three decades a continuous and inexorable decline. Even between the last two censuses there was a real collapse in the number of farms throughout the region (-64%), accompanied by a significant decrease in the number of animals (-25%), in contrast with the national situation where the number of animals remained constant. Today the ovine are only 210 thousand while they were 487 thousand in 1982. The sharp decrease in the number of farms certainly underline that actually disappear farms not specialized or small, but the size of the phenomenon seems to question the entire sector. The average size of farms, even if more than doubled at the regional level (32 to 66 animals per farm), is still much lower than that at national level (132.7 animals per farm) or in the regions of Central Italy (165.5 chiefs). Nevertheless, census data of 2010 reveal how the sheep sector at regional level present a significantly dichotomous, with no specialized farms or small farms that are compared with large farms and with a number of animals in line with the national figure. Specifically, the province of Aquila hosting farms that are on average larger and with the largest number of heads (110 heads).

Given this situation, the paper aims to investigate the production and market decisions of farms specialized in sheep breeding at the regional level, by analyzing farmôs choices through a direct survey carried out in collaboration with the Regional Association of Breeders and comparing them with the economic and structural conditions of the farms. The objective of the work is to verify if there is a correlation between "innovative" production and management strategies both in meat and milk production and selling (in terms of technological innovation, quality controls processes, direct sales, PGI productions and other certification schemes, organic etc.), structural aspects of holdings (size of the farm, herd size, location, etc.) and their economic performances (McKay et al., 1983). The analysis of technical improvements in productivity and innovation in the sector cannot be treated separately from marketing strategies (Furesi et al, 2013).

Both meat and milk production are considered, because the value of regional ovine sector is almost equally distributed between meet (6.4 million euros at current agricultural prices) and milk production (about 7 million euros), while the value of the wool is definitely lower (about 900,000 euros) (INEA (2013).

We collected data for this study through in-depth interviews to sheep farmers using a structured interview scheme. Experienced data collectors of the Regional Association of Breeders managed the interviews. Through this direct investigation, it could be possible to collect in detail aspects of production concerning 101 farms in the region, for a total of 35,980 heads (2013), representing 3.1% of the farms but more than 17% of the animals at regional level. The average dimension is about 350 heads per farm, so that they are therefore farms that operate in a professional manner on the territory (Sotte, Arzeni, 2013).

The issues covered in the direct survey are: the breeds, the type of farming (wild, semi-wild, extensive rearing etc.), the animal feed and feeding supply methods, organic certification, participation in quality production paths and PGI certification schemes, the adoption of technological innovation (i.e. milking mechanization and milk refrigeration), the sales channels of the meat, the milk processing, the sales channels of the processed products and the related trade and retail prices.

In the sample, participation in quality control schemes is still low: 61% participate in periodical quality controls programs of meat and 29% of milk, 38% produce in accordance with the Protected Geographical Indication ñAgnello del Centro Italia IGPò (Central Italian Lamb) scheme and 26% with other private certification schemes. Concerning milk production, the sample is equally divided between farms that only produce milk for selling and farms with their own cheese factory. Different channels are utilized (intermediaries, restaurants, modern distribution, direct on farm selling) and there is a strong variability in trade and retail prices, so that the supply is characterized by heterogeneity both in terms of products quality and distribution choices.

We use the results of this representative survey across Abruzzo Region in order to analyze and interpret farms market strategies and their capacity to adjust supply to demand, modifying the breeds of sheep or the breeding methods, introducing quality innovation and labels, adapting the selling strategies.

The survey results were compared with the structural and economic aspects of the farms, through the use of Census micro-data provided by ISTAT (Italian National Institute of Statistics). In addition, for the part of the farms under investigation covered by the observation survey FADN (Farm Accountancy Data Network), it was possible to analyze in detail the production choices, costs and economic results. The relations among technical, economic and market parameters were analyzed using multivariate statistical tools.

The present paper increases the conceptual and empirical understanding of sheep market functioning in Abruzzo Region. It is an addition to existing work on meat and milk food supply chains (Dries, et al., 2009; Marsden, et al. 2002) and on the benefits of labels and innovation for securing farmersô

access to markets (Deaton, Busch, Samuels, Thompson, 2010). Furthermore, some information can be used to orienting sectorial and local development strategies and policies.

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