



Research paper

Management and productivity of dairy sheep production systems in Castilla-La Mancha, Spain



Martíña Morantes^a, Rafaela Dios-Palomares^{b,*}, María Elena Peña^c, José Rivas^d,
José Perea^e, Antón García-Martínez^e

^a Instituto de Producción Animal, Facultad de Agronomía, Universidad Central de Venezuela, Venezuela

^b Departamento de Estadística, Investigación Operativa, Econometría, Organización de Empresas y Economía Aplicada, Edificio Albert Einstein, Carretera de Madrid, 14071, Córdoba, Spain

^c Departamento Socioeconómico, Facultad de Ciencias Veterinarias, Universidad del Zulia, Venezuela

^d Departamento de Producción Animal, Facultad de Ciencias Veterinarias, Universidad Central de Venezuela, Venezuela

^e Departamento de Producción Animal, Universidad de Córdoba, Spain

ARTICLE INFO

Article history:

Received 27 July 2016

Received in revised form 10 January 2017

Accepted 14 January 2017

Available online 31 January 2017

Keywords:

Sheep production systems

Managerial capacity

Productivity

Composite indexes

ABSTRACT

The Planning, Organisation, Direction and Control functions of dairy sheep breeders in the La Mancha natural region were evaluated by constructing composite indexes of their management. The studied farms, the majority of which were family-run, rely heavily on the use of arable land through sheep grazing. A close relationship between the Direction and Control functions was found, while the functions related to the Organisation and Control stand out as the most deficient. The incidence of management functions in productivity was studied through ANOVA (analysis of variance) and SCA (simple correspondence analysis). A medium-low level of managerial functions, coupled with a positive effect of these functions on the productivity of the systems was identified, leading to the conclusion that management can be improved when special attention is given to its more neglected features, and that this improvement could lead to an important increase in productivity. These measures are particularly important in this area of production where profitability and sustainability are currently being questioned.

© 2017 Elsevier B.V. All rights reserved.

1. Introduction

The natural region of La Mancha is located in Castilla-La Mancha, the last of the autonomous communities of greater sheep production in Spain, with approximately 2.5 million heads (FEAGAS, 2013). On these farms, the Manchega breed prevails, dedicated mainly to milk production for the production of Manchego cheese (de Rancourt et al., 2006). These production systems have traditionally been based on grazing systems in agro-ecological zones characterised by low-quality grasses with severe availability limitations. Thus, one of the most important features of these farms is their extensive production based on the utilisation of the land despite its high dependence on the grazing system. Farmers constantly face difficulties due to the need for increasing pasture resources and providing better grazing infrastructure, as most of the farmers do not own the land. This condition generates a social conflict, com-

plicated by the ever-growing shortage of sheepherders (Caballero and Fernández-Santos, 2009).

A wide variability in the production outcomes of livestock farms in the studied area of production has been detected, although most of these farms operate under similar environmental and economic constraints. Wilson et al. (2001) mentioned that in many instances, this difference in performance is due to a different management approach. Other research indicates that producers using the appropriate management strategies are more successful than those who do not (Harling, 1992). However, few studies have identified in detail the effect of managerial on production. Family-run farms form a high percentage of this sector. This is very important in relation to the managerial function because it affects the decision-making in the company. Olsson (1989) indicates that decision-makers in mainly family-run agricultural farms develop their productive activity assuming their roles as a life and work style. They do not establish the objectives or goals of growth and competitiveness. Thus, the management of these farms is different from the management of others. In the Spanish countryside, farmers have developed a process of resilience, adapting gradually to new ways of life and professional strategies, which have led to a

* Corresponding author

E-mail address: rdios@uco.es (R. Dios-Palomares).

decrease in the number of producers, with the risk of the reduction or disappearance of rural areas and the increase of daily or seasonal mobility (Paniagua, 2013), among other results.

Under the above considerations, the need to consider the incorporation of the elements of management in the running of livestock production systems is well known. Rougoor et al. (1998) defined managerial capacity as having the appropriate personal characteristics and skills to deal with the right problems and opportunities in the right moment and in the right way. In the literature, the managerial function relies on two components: the mechanical and dynamic phases of management (Peña, 2012). The mechanical phase of management includes the functions of Planning and Organisation, and through it, what must be done should be studied according to the aspects of Organisational structure (Chiavenato, 2006; Reyes, 2004).

The Planning function defines the objectives to follow and how to achieve them, depending on the characteristics of the means of production available (Chiavenato, 2006). Specifically, in sheep milk herds, the exploitation plan provides a framework that allows optimal viability, the stability of the workforce (either family or paid) and the profitability of the stakeholder (Martín et al., 2010).

On the other hand, the Organisation function facilitates the fulfilment of objectives by the pooling and allocation of activities as well as through the delegation of authority (Peña, 2012).

The Dynamic phase integrates the functions of Direction and Control and is directly related to the performance of the human component within the farm. Thus, Direction ensures that the objectives set out in the mechanical phase (Planning) are achieved properly; hence, the actions of the human factor acquire great importance (Reyes, 2004).

Finally, by the Control function, the results achieved are evaluated using the information available to the farmer to determine how close these results are to the previously defined objectives (Ondersteijn et al., 2003).

In short, it can be said that in the full function of management, the Planning function opens the administrative process, and the Control function closes it (Chiavenato, 2006). In this context, it is of special interest to assess the level of care provided by farmers according to the realisation of the management function. To this end, it is necessary to establish a methodology that allows the quantification of each of the areas of management, summarising them through a global measure. The establishment of this measure allows the determination of which aspects of the managerial functions are applied for each farm to identify improvement measures that would lessen deficiencies. A procedure that can serve as a tool for this purpose is the creation of composite indexes (Peña, 2012; Peña et al., 2014). Although there is a precedent for the evaluation of management by other less precise methods (Peña et al., 1998), we consider that the methodology applied by Peña (2012) for the creation of management indexes, and by Dios Palomares and Martínez-Paz (2011) for the calculation of the indexes of quality and environmental management, solves this problem suitably.

Knowledge of the level of management in the area becomes more significant if its possible relationship with the productive results is considered. The study of this relationship has led to several studies on the managerial capacity of the producer, the information used, its behaviour and the relationship between the management and the results of the production unit (Nava et al., 2008; Peña, 2012).

In relation to livestock farms, Hansson and Ferguson (2011) noted that the use of openly available information such as farm industry magazines and the Internet, significantly and positively affects the strength of the intended strategy to develop milk production. For dairy cattle systems, Stup et al. (2006) found a positive and significant relationship between the use of continuous training and profits. Peña (2012) reported that in dual-purpose cattle systems, the highest values of milk and meat production were obtained

for production units that showed the highest values of Planning and Organisation partial indexes. Farmers who perform better Planning and Organisation are also more intensive in the use of production factors. Likewise, in similar production systems, Nava et al. (2008) found that farms with deficient performance in Planning and evaluation obtained the lowest values for milk and meat produced per hectare in cows.

There is no evidence of previous study in the dairy sheep production system. However, based on the authors' knowledge about the breeding of sheep in Castilla-La Mancha, it can be assumed the average level of attention to the management functions is not high, given that most are family-type farms. However, there are some farms with good productive results that follow an operating plan and have a well-managed staff, who have made assessments to determine whether the objectives have been met (Peña et al., 2014). This fact provides reasons to believe that there is a relationship between the management and the productive performance of farms. If this direct relationship between the application and the use of management functions and performance can be demonstrated in the dairy sheep farms of Castilla-La Mancha, actions could be taken to decrease the deficiencies in the management aspects of the area that would lead to a substantial improvement in the productive results.

On the basis of the aforementioned information, this research has been conducted with the dual objective of quantifying the managerial functions of dairy sheep farming in Castilla-La Mancha and determining their effect on productive performance. In a previous paper, we have published results within the same research line, and the influence of socioeconomic characteristics on the management level of the farms was concluded (Morantes et al., 2014). The present study will allow the establishment of proposals for the improvement of the management functions that will directly affect the performance and productivity of the sector.

2. Materials and methods

The data used in this research were collected through the application of a survey in which social, technical, and economic aspects were requested through 226 questions. Direct interviews were performed with a sample of the dairy sheep producers' population in the geographic area of the denomination of protected origin "Manchego cheese", corresponding to the 2010–2011 season. Using stratified sampling with proportional allocation according to geographical location and size of the herd, 157 farms were chosen at random from the 6781 total farms. The experimental error was 7.82% (significance level: 5%).

On the basis of the theoretical framework proposed by Chiavenato (2006), information regarding characteristics or actions that reflect aspects of the managerial functions of Planning, Organisation, Direction and Control was asked in the survey.

The behaviour of the farmers regarding all these aspects has been studied in this research following two complementary procedures. First, the percentages of the farmers that accomplished the actions has been calculated to study the level of management regarding each function. This analysis allowed us to determine the weaknesses of the studied farms.

Second, we have performed synthetic indexes. One index has been carried out for each managerial function, and we called these the Initial Indexes. From all the collected information, we selected the aspects that could represent quantifications of whether actions were bad or good practice in relation to the four managerial functions. All the attributes that were used for the implementation of the indexes are shown in Table 1, and they can be better understood through the analysis presented in paragraphs 3.1 and 4.1.

Download English Version:

<https://daneshyari.com/en/article/5544247>

Download Persian Version:

<https://daneshyari.com/article/5544247>

[Daneshyari.com](https://daneshyari.com)