



Effects of European Union agricultural policies on the sustainability of grazingland use in a typical Greek rural area



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ABSTRACT

Recent changes in the Common Agricultural Policy (CAP) introduced different definitions regarding the eligibility of various types of land used by grazing animals. In particular, shrublands and other low-quality areas which have traditionally been used as grazinglands are now not eligible for European Union income support payments. Subject to these changes, a large part of livestock farms will be affected, being partially or fully deprived of EU income support. In addition to these policy-driven changes, pasture-fed livestock farms in Greece are faced with a unique system of grazingland allocation, as all grazing areas in the country are state-owned. These areas are allocated for a short period either directly to farmers who are permanent residents of the Municipalities or to other livestock farmers through an auction system, which does not take into account the grazing capacity thus bringing about environmental degradation. This paper investigates the effects of CAP changes and of this communal land allocation system based on the findings of a typological analysis. The study focuses on a typical Greek territory in terms of land uses, economic activities and sociodemographic developments. Data from a questionnaire survey are used to build a typology of local livestock farms in terms of their nutritional management and land use characteristics and then the profile of each type is investigated through the estimation of a Multinomial Logit Model where the dependent variable is the cluster participation. Three distinct types of farms (clusters) are determined. Cluster 1 includes traditional farms which rear sheep and goats and bovine for meat, which are highly dependent on grazingland uses and EU income support. Cluster 2 farms – mainly sheep and goat – have evolved a ‘double’ dependency on land in the form of grazingland but also of cropland for feedstuff production, which renders them more resilient to policy changes. Finally, Cluster 3 farms are intensive dairy cattle farms and use artificial (cultivated) privately-owned grazinglands and cropland for feedstuff production. Market-oriented measures are proposed for each type and suggestions for an integrated land use plan are made, including long-term leasing of land and the consideration of environmental criteria for land allocation, thus rendering farmers responsible for keeping their land in a good production state.

1. Introduction

Ruminant livestock production systems in the European Union (EU) vary as to their dependence on land uses, either for production of feedstuff or for use as grazingland. Dependence on grazing ranges from systematic grazing on natural and semi-natural grasslands and shrublands (extensive or semi-extensive systems), to grazing in artificial/cultivated pastures (semi-intensive systems), while in the case of intensive farms dependence involves the cultivation of farmland for the production of forage and concentrates (Madry et al., 2013). In

Greece there are examples of intensive and semi-intensive systems cultivating forage crops and artificial pastures (e.g. Manousidis et al., 2011), but grasslands and shrublands – which are traditionally used as grazinglands in Greece – are particularly important for extensive and semi-extensive grazing-based livestock systems (Bernués et al., 2011), especially in less-favoured areas (LFAs). These extensive systems produce high-quality food (Zdragas et al., 2015; Nori, 2016) and perform important environmental roles, considering that they maintain High Natural Value (HNV) farmland which accounts for more than half of the total Usable Agricultural Area in Greece (Bernués et al., 2011;

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Keenleyside et al., 2014). In addition extensive and semi-extensive systems play a vital social and economic role, providing flexibility to farmers (Martin et al., 2009) by permitting them to vary the ratio grazing/provision of feedstuff according to the external circumstances (Lemery et al., 2005).

It is evident that the proper access of extensive and semi-extensive livestock farms to grazinglands highly defines their economic performance and overall sustainability. Nonetheless, in Greece this is not always an easy task mainly due to the unique system of grazingland ownership and allocation. Grasslands and shrublands are owned by the state and Municipalities are responsible for their allocation to livestock farmers. This communal system, which is presented in more detail in a subsequent section, is linked to numerous problems which not only cause environmental pressure but also hinder the development of grassland-based livestock systems in general. Environmental problems mainly stem from the fact that farmers cannot implement systematic management and/or improvements, because they are not rewarded the same area for a large period of time; in addition, areas are usually allocated to farmers without knowledge of their true grazing capacity – due to a lack of relevant scientific and policy data – or of the true stocking rates, as actually there are no grazing management plans in Greece. When it comes to economic and development repercussions, the whole sector suffers from lack of proper infrastructure for livestock farmers and flocks (roads and paths, makeshift buildings, watering points, feeders etc) but also from the lack of an integrated land use plan, which would designate grazing areas where competitive activities would be banned. In addition, this system is a cause of social conflicts in rural societies due to the vagueness of the allocation criteria and to the auction system, which favors specific groups of livestock farmers who have the economic means to place the highest bids (Ragkos et al., 2016).

Despite the importance of extensive livestock systems in the EU, the legislative framework governing their operation and their income support mechanisms are ambivalent. The evolution of the Common Agricultural Policy (CAP) has demonstrated a wider recognition of the multifunctional roles of extensive systems (Gibon, 2005), which is also evident in the latest rural development Regulation (Reg. EU/1305/2013). However, no clear distinctions are made between extensive and intensive systems and no targeted measures are proposed to accommodate the specific needs of the former compared to the latter (Ragkos and Nori, 2016). As a result, the sustainability of grazing-based systems is equally threatened by intensification and abandonment patterns, which have shaped many Mediterranean grasslands and agro-ecosystems (Caballero et al., 2007; Ragkos and Nori, 2016; Varela and Robles-Cruz, 2016). In addition, the CAP framework frequently favors the homogenization of farmland and entails adverse effects for areas which are rich in biodiversity, thus reaching opposite goals than those stated (Jakobsson and Lindborg, 2015). The implementation of Reg. EU/1307/2013, setting new rules for the eligibility of income support for livestock farmers (decoupled payments), constitutes a very vivid example of the sort. The definitions of permanent grasslands and pastures are revised and do not include shrublands, despite the fact that such areas have been traditionally used for extensive livestock grazing. Thus, numerous livestock farms are excluded from payments and their viability is threatened, as they are generally vulnerable to policy changes (Gaspar et al., 2008; Dong et al., 2011; López-i-Gelats et al., 2016).

The new CAP reform largely treats all livestock farmers as a homogeneous group. However, uniform policies are not appropriate for all farmers and systems, as especially grazing-based systems are highly heterogeneous (Madry et al., 2013). Instead, the recognition of homogeneous fractions within these systems – through the use of typologies – could serve as a tool to propose better targeted policy measures (Gibon, 1994; Lesschen et al., 2005; Barrantes et al., 2009), to achieve improved management practices and higher economic performance (Ruiz et al., 2010; Gelasakis et al., 2012) and to comprehend

their complex nature and interrelations among factors governing their operation (Milán et al., 2011; Riveiro et al., 2013).

The purpose of this paper was to investigate the potential impact of the recent CAP reform on livestock farms in a typical Greek rural area. Building on the results of a typological analysis, the study endeavored to detect homogenous farmer groups with particular dependencies on land uses and to analyze how these dependencies are linked to farm characteristics. The analysis takes into account the particular Greek communal management system of state-owned grazinglands and provides insights regarding its repercussions for each farm type. Under the light of the revised CAP, potential issues are discussed and remedial measures are proposed for each profile separately, which could assist livestock farmers to overcome the problems from the changes in income support payments. The proposed measures could also serve as tools for more sustainable land use patterns.

2. Materials and methods

2.1. Grazing management in Greece – the legislative framework

Despite the importance of HNV areas and permanent grasslands in Greece, the issue of their efficient uses had not received adequate attention until recently. Their importance is now established not only because they define the productivity of livestock farms and the quality of their products, but also because CAP income payments are calculated based on the acreage of permanent grasslands and pastures used by each farm. Currently, these issues are regulated by Reg. EU/1307/2013, complemented by Reg. EU/639/2014 and Reg. EU/640/2014. The legislative framework points to a clear distinction between permanent grasslands – areas which can be used for grazing – and land eligible for CAP financial support.

Based on the implementation of this framework, Greek livestock farmers get income support of about 260 €/ha of eligible grazingland. However, there are considerable changes in the eligibility of livestock farmers for income payments. The first change involves the characterization of permanent grasslands as agricultural areas (Reg. EC/1307/2013), while in the past these areas were not characterized as farmland but only as grazingland. Second, grasses should definitely be the prevailing type of vegetation (i.e. to exceed 50% of the eligible area), while previously shrublands and other types of grazingland were also equally eligible, even if rock coverage was significant. Now, exceptions are only allowed when the basic grazing material (forage) has traditionally been other than grasses, but in these cases the 'eligible area' of the grazingland is reduced according to predetermined coefficients (Table 1). Third, permanent grasslands can only be eligible if they are appropriate for grazing, under the criteria of Table 1, without preparatory activities or additional interventions. By combining these amendments, the new CAP introduced four types of eligible areas according to the percentage of woody vegetation and rocks (Reg. EU/639/2014), which are presented in Table 1. Although areas with high percentage of such compounds are of low quality, they have traditionally been used by sheep and goats in mountainous and less favored areas in Greece.

The changes of the CAP framework cause additional pressure to farmers, as the already existing system of grazingland allocation is quite

Table 1
Percentage of eligibility according to the percentage of the woody vegetation compound and rocks.

Percentage of woody vegetation compound and rocks	Percentage of eligibility of the area
> 75%	0%
51–75%	37.5%
26–50%	62.5%
< 25	100%

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