sustainability

MDPI

Article

Animal Husbandry in the Cilento, Vallo di Diano and Alburni National Park: An Economic-Structural Analysis for the Protection and Enhancement of the Territory and Local Resources

Michele Cerrato, Giuliana Benincasa, Allegra Iasi and Maria Pergola *

Degree Course of Agriculture, Dipartimento di Farmacia, Università degli Studi di Salerno, Via Giovanni Paolo II, 132, 84084 Fisciano, Italy; mcerrato@unisa.it (M.C.); gibenincasa@unisa.it (G.B.); a.iasi@studenti.unisa.it (A.I.)
* Correspondence: mpergola@unisa.it; Tel.: +39-320-7875-447

Abstract: This research seeks to deepen the current economic and structural aspects of the livestock farms in the rural territory "Casacastra" (Cilento area), to identify critical issues and development opportunities with the intention to enhance and protect the territory under study also through strengthening forms of local economy. Information about the consistency and the typology of livestock farms present in the study area, and the trend in the last twelve years, were acquired thought the consultation of the national livestock register of the Italian Ministry of Health. Subsequently, a questionnaire was submitted to a sample of farmers to better know the characteristics of the breeders and of the husbandries. The results showed that in the study area, there are 4% of the cattle and sheep herds of the Campania Region, and 7% of those with goats. The most representative farm size is the class with less than 20 animals per breeding type, and between 2010 and 2022, there has been a reduction in the number of all types of analyzed husbandries. The most represented productive orientation is that for meat, while the specialization in the production of milk in sheep and goat breeding is completely absent. The interviews revealed that the breeders are almost all over 40 years of age, with middle and high school qualifications and consolidated experience. The workforce involved in the farms is mainly the family one and often breeders are people engaged in other non-agricultural activities. Despite the permanence in some cases of archaic husbandry methods, the breeders play a key role in the study area for the protection of the territory, and the conservation and enhancement of local animal and plant genetic resources are at risk of extinction. Moreover, the survival of this rural context is linked to the development of new forms of local economy, such as the definition of an experiential rural tourist offer, in which the presence of institutions plays a fundamental role.

Keywords: sustainability; rural development; biodiversity; livestock; resilience

Citation: Cerrato, M.; Benincasa, G.; Iasi, A.; Pergola, M. Animal Husbandry in the Cilento, Vallo di Diano and Alburni National Park: An Economic-Structural Analysis for the Protection and Enhancement of the Territory and Local Resources. *Sustainability* **2023**, *15*, 7863. https://doi.org/10.3390/su15107863

Academic Editors: Gabriele Scozzafava and Francesca Gerini

Received: 7 March 2023
Revised: 27 April 2023
Accepted: 8 May 2023
Published: 11 May 2023

1. Introduction

The Farm to Fork Strategy (F2F), combined with the European Union (EU) Biodiversity Strategy for 2030, is one of the important elements of the European Green Deal and represents the ten-year plan developed by the European Commission to guide the agricultural transition towards a fair, healthy, and environmentally friendly food system. For the first time, the EU is trying to design a food policy that proposes measures and objectives that involve the entire food chain, from production to consumption, naturally passing through to distribution. The underlying goal is to make European food systems more sustainable than they are today [1].

As regards the agro-livestock sector, among the objectives of the F2F Strategy, there are: (1) the commitment to reach 25% of the European agricultural area (EAA) dedicated to organic farming; (2) the commitment to reach 10% of agricultural areas destined for

green infrastructure for nature conservation; (3) the commitment to reduce the risk and quantity of pesticides used in agriculture by 50%; (4) the reduction of food waste [2]. With special reference to livestock farms, the key points to be achieved seem to be: (1) circular bioeconomy, namely to create a circular agriculture in which nothing is thrown away and everything is recovered (recovery of matter and energy; anaerobic treatment of livestock effluents, and production of renewable energy); (2) increase of the European production of vegetable proteins and reduction of the import of feed and nutrients; (3) improved animal welfare by improving animal health and food quality and reducing the need for antibiotics [3].

So, how to achieve these ambitious goals? In the last half-century, livestock activity has been mainly oriented towards a more specialized type of farm represented essentially by the husbandry of cosmopolitan breeds. The latter, easily adaptable to the most diverse climatic-environmental situations, characterized by easy calving and excellent meat quality, have gradually established themselves acquiring a clear numerical dominance. On the contrary, the local breeds, characterized by more specific productive aptitudes, have deeply resized and their reduction has been particularly severe [4].

Today more than ever, there is the need to consolidate the relationship between husbandry, territory, and typical local productions due to the social, economic, environmental, and territorial implications that derive from it. In inland and park areas, livestock systems are today faced with crucial choices on which their ability to evolve and develop will depend. Faced with the presence of growing ecological constraints and incentives, they must find a better balance between forms of production intensification (induced by pressing economic needs) and extensive management methods able to guarantee forms of positive integration with the environment and to contribute to the conservation of the territory and the landscape. Husbandry in protected areas plays a multifunctional and territorial role, not aimed at the production of generic food products, but rather oriented towards the maintenance of local and typical products obtainable with traditional or innovative husbandry techniques compatible with conservation needs of nature [4].

The Cilento, Vallo di Diano and Alburni National Park, declared a UNESCO World Heritage Site in 1998, is very rich in biodiversity, witnessed by the presence of many Sites of Community Importance (SIC) [5]. Here, animal husbandry is of considerable importance both from an environmental point of view, of safeguarding the territory through the fire prevention function, forest cleaning, soil erosion control, and both from an entrepreneurial and economic point of view, of sustaining to households for food production. Cilento is a territory where agricultural and livestock activities are mainly aimed at self-consumption: only the excess part of self-production goes to the market, and mostly to a local one [6].

In this context, the aim of the present research was to deepen the current economic and structural aspects of the livestock farms in a rural area supported and enhanced by the Local Action Group (LAG) "Casacastra" (Cilento area), through the analysis of census data and interviews with a sample of livestock farmers, to identify critical issues and development opportunities. This was undertaken to enhance and protect the territory under study also through the strengthening of forms of local economy.

2. Materials and Methods

2.1. Study Area Description

The study was carried out within Salerno Province, in the LAG (a partnership between public and private subjects which has the objective of promoting the development of a rural area) "Casacastra", made up of 28 municipalities (Figure 1) of considerable landscape and environmental value. The latter are part of the Lambro, Mingardo and Bussento mountain community. It is an extremely difficult territory due to its orography and in which economic development is difficult, above all, for problems related to the road network. They are very small municipalities, which in some cases barely reach 500 inhabitants, characterized by an aging population and the migration of young people.

Figure 1. Study area: LAG "Casacastra" in the Cilento, Vallo di Diano and Alburni National Park. Map from Google Earth.

To the north, this territory is delimited by the southern slope of the orographic arc traced by the massifs of Gelbison and Mt. Cervati and by the Serralunga, while, to the south, by the Tyrrhenian Sea. The rich hydrographic network and the silhouette of Mt. Bulgheria complete the articulated mosaic typical of Mediterranean landscapes, among which there are: (a) the landscape of calcareous reliefs, characterized by holm oak woods with deciduous trees, Mediterranean scrub, and grasslands with a prevalence of therophytes; the agricultural areas host a significant percentage of olive groves and heavily parceled areas intended for traditional agriculture; (b) the mountain landscape, which extends to altitudes between 400 and 1700 m a.s.l., in which the presence of turkey oak and oak woods is significant from a biogeographic point of view, and of absolute importance are the tall oak forests and mixed mesophilous woods; also here, the soils are suitable for olive growing, cereal growing, forage-livestock, and forestry; (c) the landscape of the internal hills, an area with the greatest agricultural vocation and characterized by the presence of Pisciotta olive trees or by traditional agricultural activities; (d) the landscape of the coastal hills, characterized by rounded tops, with gently undulating and incised slopes. The active agricultural areas are characterized by a large prevalence of olive groves and arable land with trees compared to simple arable land, with a widespread presence of traditional arrangements (terracing), often in precarious maintenance conditions. Alongside the phenomena of agricultural abandonment, it is possible to locally find an opposite tendency towards the specialization of woody plants, linked to the enhancement of typical local products [7].

The livestock sector in the study area still represents a significant component of agricultural activities today. Thousands of animals are bred belonging to both ancient native breeds now at risk of extinction, such as the Cilento goat, and other breeds that have adapted to the local pedoclimatic environment. Semi-extensive pasture husbandry, with natural feed integration after birth and in winter, has an important role in the agriculture of this area. Unlike the areas where intensive husbandry is practiced, here the animals have not been removed from the pasture to put them in huge sheds, nor has the forage been replaced with cereals or oilseeds. The bond between animals and the earth has not been severed; nature still relies on the recycling of nutrients, balancing the ecosystem. The animals raised, therefore, continue to be an integral part of an organic and interdependent system with agriculture and the rural landscape. Particularly, they graze and revitalize

fields by means of their manure with high fertilizing value. This is a typical example of a circular economy [8].

2.2. Analysis of the Current Situation and Trends in the Study Area

The first phase of the research concerned the acquisition of information about the consistency and the typology of livestock farms currently present in the study area, and the trend in the last twelve years, through the consultation of the national livestock register (NLR) of the Italian Ministry of Health [9].

2.3. Sample Sizing and Extraction

The previous survey was used to define the size of the sample of breeders to submit a questionnaire specially prepared for data collection (File S1—The questionnaire). In particular, the fieldwork was sample type, using the statistical sampling criterion [10]. The sample involved 62 farms and was obtained through proportional stratified sampling [11]. To extract the sample, the population under study was divided into homogeneous strata (subsets) by type of animal bred, but heterogeneous among them. In particular, the list of livestock farms of the LAG Casacastra was divided into bovines, ovines, and caprines, and mixed farms (with bovines, ovines, and caprines).

This aforementioned type of sampling was optimal to prepare a well-distributed analysis of the data in our possession and to make a possible comparison between the various types of farms. The sample represented 20% of the market-oriented farms present in the study area and was extrapolated proportionally for each stratum and randomly within each stratum (simple random sampling). From each sample group, with the calculation of the proportion, the sample of 62 farms was formed as follows:

- 31 herds (about 50% of the population);
- 16 flocks (sheep and goat) (about 26% of the population);
- 15 animal farms (with cattle, sheep, and goat) (about 24% of the population).

The verification of the reliability of the sample size was carried out by simulating the answers to some questions of the questionnaire and estimating the variance, the standard error, and the variability of the proportion, a procedure which expresses in percentage the range of possibilities given by the sample answers and representative of the population N.

After the fact-finding analysis on the size and number of farms of the study area, the farms with a small number of animals (below 14 sheep and goats and 3 cattle) were excluded from the sampling, considering these numerical consistencies completely inadequate for the purpose of the research, and therefore considering these farms for self-consumption or marginal in the business activity. Moreover, the farmers who did not want to participate in the research were excluded, so the interviews involved 52 livestock farmers.

2.4. Structure and Articulation of the Questionnaire Used

The questionnaire (File S1—The questionnaire) designed and administered to the sample of farmers of the study area presented two types of variables: categorical, that is, the questions which had the possibility of an answer "yes" and "no", and explanatory, that is, the questionnaire identified the groups to be compared, such as the age of the interviewee or the year in which the activity started. In particular, the detection tool was composed of 27 questions divided into four sections:

1. General overview: the questions about the ownership of the farm, the age of the interviewee, and the type of training were reported; as well as information regarding any farm and extra-farm activities of the owner, the registration with National Social Security Institute (NSSI) management, the presence or absence of other employees, full-time or part-time, and if there were other production processes in the farm connected to the livestock production.

Sections 2 and 3 investigated the characteristics of the husbandry activity, and therefore the structural variables; in particular:

2. Husbandry: questions were raised about the beginning of agricultural and breeding activity; the number of animals and species reared; the husbandry system and types of housing; the possible practice of transhumance; whether or not to register in the national livestock register (NLR). A particular role has been assigned to forage cultivation, and to this end, the following questions have been raised: forage production, purchase of forage, and feed and self-supply;
3. Farm structures: detection of the structural characteristics of the farm, and in particular the presence of farm buildings and surfaces.

Finally, the last section concerned the economic aspects of the agricultural realities of the investigated territory, and in particular:

4. Products and financing: value of products sold in the farm, forms of procurement of financial resources, land investments; business forecasts for the future and general concern about increases in production costs.

3. Results

3.1. The Livestock Sector and Its Recent Evolution in the Study Area between 2010 to 2022

3.1.1. The Cattle Sector

In 2022, 339 herds were active in the study area, representing 10% of the herds of the Province of Salerno and 4% of those of the Campania Region [9]. The most representative farm size was the class with less than 20 cattle per farm (70%), while the remaining 30% included herds with a size greater than 20 cattle (only 7.4% of which with more than 50 cattle per farm).

The orographic characteristics of the territory under study and the scarcity of suitable forage cultivation allowed the activity only to small-scale farms. In fact, in the territory covered by the survey, in 2022, there were 6027 cattle: only 12% of those present in the Salerno province and 4% of those of the Campania Region.

From the database NLR, it emerged that in the last decade, in the study area, there has been a reduction in the number of herds of about 47%, similarly to what happened at the provincial and regional level (Figure 2).

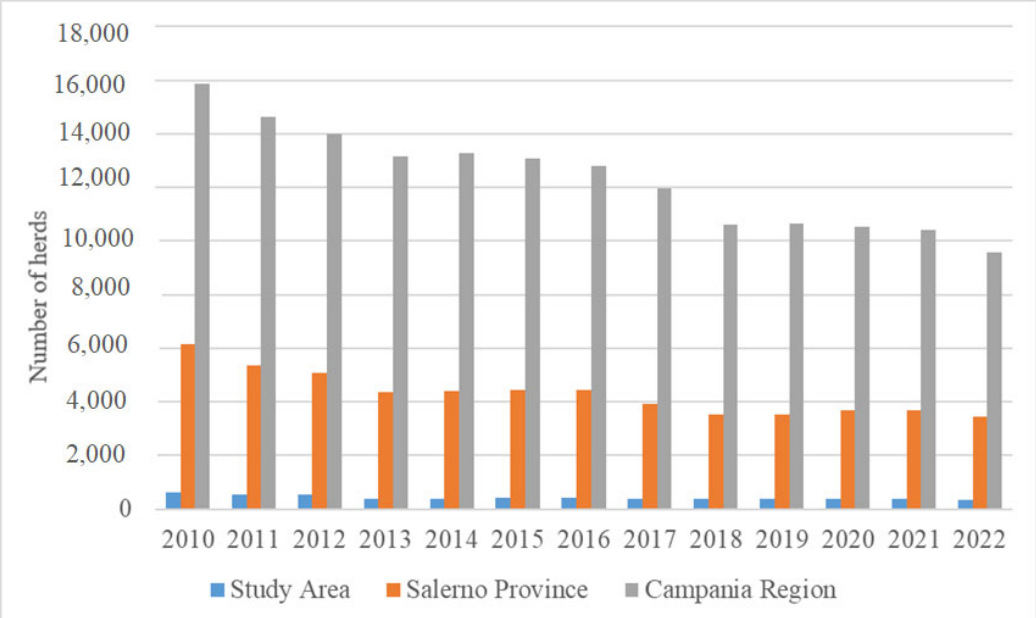

Figure 2. Time trend of the number of herds in the study area, in Salerno Province, and in Campania Region.

Regarding the average number of cattle per farm, in 2022, the territory of LAG "Casacastra" showed an average number of cattle per herd of 18 compared to 9 in 2010, with an average increase equal to 88%, essentially due to the number halving of the cattle breeding. According to the provincial data, in 2022, the average was 15 cattle per farm against 10 in 2010, with an increase of 56%. Data were in contrast with the regional one, in which an increase of 36% was recorded.

In the period 2010–2022, the evolution of the number of bred cattle showed first an increase and then a static state, while at the provincial level, there has been a reduction of 12%, with even more marked reduction if we refer to the regional data (−18%) (Figure 3).

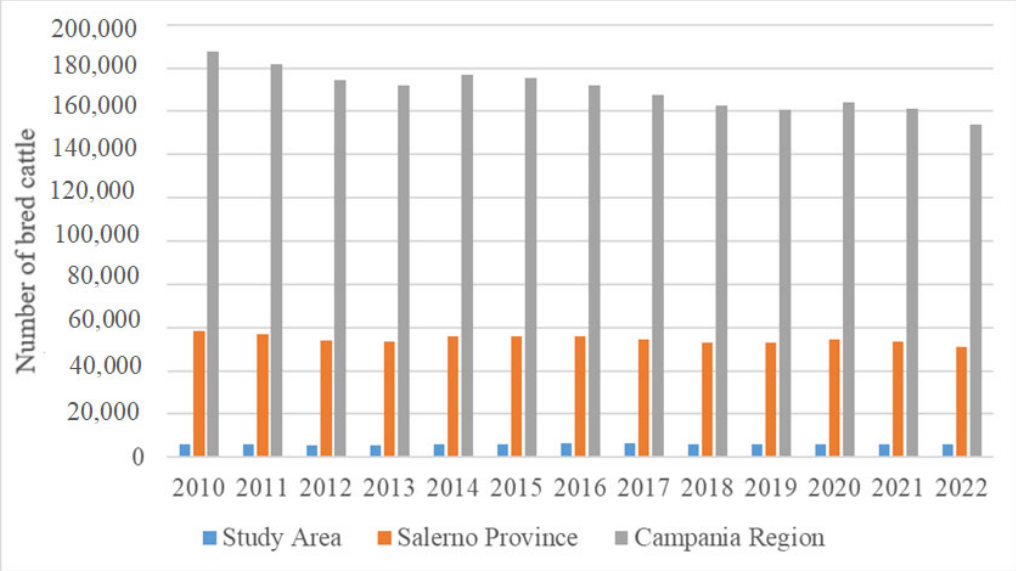

Figure 3. Time trend of the number of bred cattle in the study area, in Salerno Province, and in Campania Region.

As regards the productive orientation, in 2022, 84.3% of cattle breeding in the study area were for meat. A marginal role was covered by dairy farms and those mixed (dairy and meat farms), which represented together 15.7%. The meat farms of the area accounted for 11.57% of the total of the province of Salerno and only 4.28% of the regional one.

3.1.2. The Sheep Sector

In the study area, in 2022, there were 208 flocks of sheep, namely, 11% of sheep farms of the province of Salerno and 4% of those of Campania region. Moreover, 45% of the study area's sheep breeding had a consistency between 1 to 20 sheep, while only 10% had more than 100 sheep [9].

Between 2010 and 2022, a negative variation of 29% was recorded in the number of flocks of sheep in the municipalities falling within the study area. This trend was higher than that of the province of Salerno (−22%) and the regional one (−26%) (Figure 4).

Regarding the number of sheep, in 2022, in the study area, there were 4875 heads, which represent 9% and 3% of the number of sheep at the provincial and regional levels, respectively. This consistency showed an extraordinary increase of 1553% in the period 2010–2022, essentially due to the lack of data in the NLR database as the registration of the bred sheep became mandatory only starting from 2015. In fact, if we consider the period 2015–2022, an average decline of 19% was recorded, against an increase recorded both at the provincial and regional level for the same period (Figure 5).

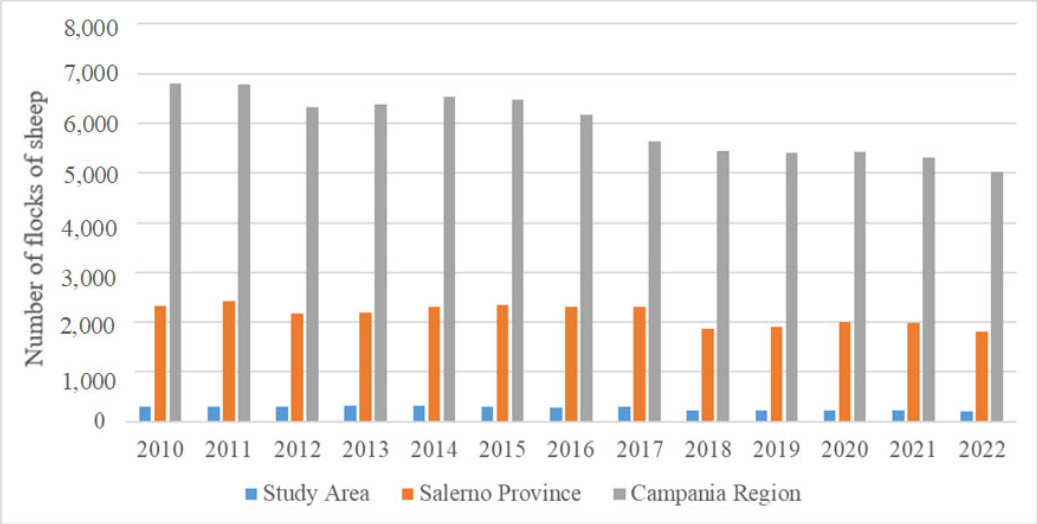

Figure 4. Time trend of the number of flocks of sheep in the study area, in Salerno Province, and in Campania Region.

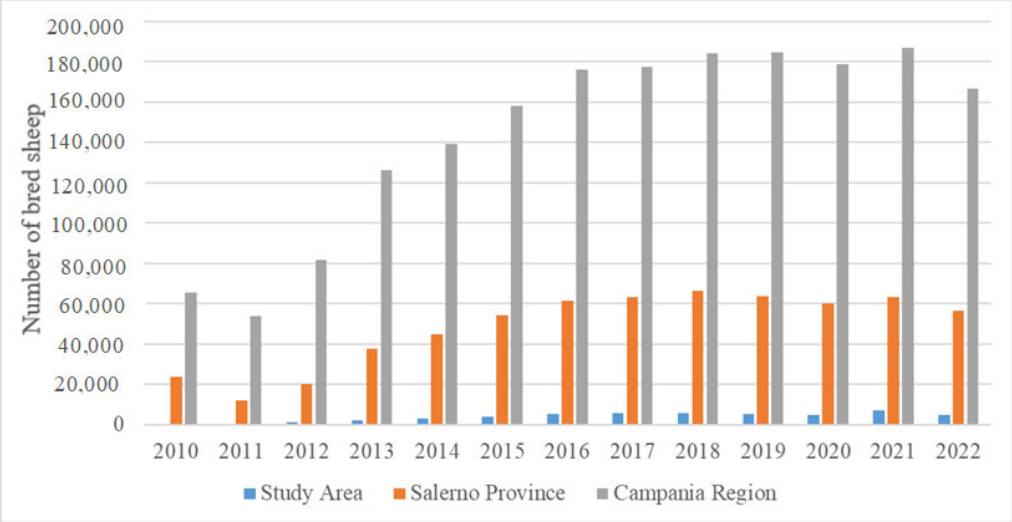

Figure 5. Time trend of the number of bred sheep in the study area, in Salerno Province, and in Campania Region.

Within the study area, each sheep breeding farm, in 2010, had an average of 18 sheep, while in 2022, this number was equal to 23. At the provincial level, in 2010, an average of 10 sheep were registered for each farm, compared to 31 in 2022. At the regional level, in 2010, a farm had an average of 10 sheep, while in 2022, they amounted to 33.

As regards the productive orientation of these husbandries, 40% were meat farms, while 60% were of mixed type (meat and milk). It should be noted that the absence of sheep breeding specialized in the production of milk. Sheep meat breeding accounted for 12.5% of the provincial data and 3% of the regional one. Farms that produced both milk and meat, on the other hand, accounted for 14% of the provincial data and 6% of the regional one.

3.1.3. The Goat Sector

In the area under observation, in 2022, there were 179 flocks of goat, namely, 11% and 7% of those of the province of Salerno and of Campania region, respectively. Moreover, 66% of the study area's goat farms had fewer than 20 goats, while only 9% had more than 100 goats [9].

From 2010 to 2022, the number of these flocks recorded a reduction of 31%, a greater decrease than both the provincial and regional data (−25% and −13%, respectively) (Figure 6).

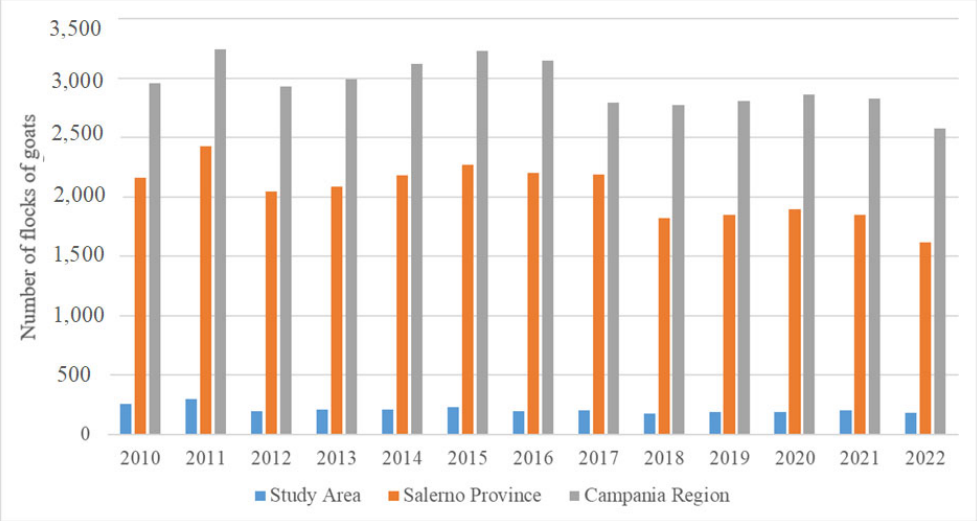

Figure 6. Time trend of the number of flocks of goats in the study area, in Salerno Province, and in Campania Region.

As regards the number of goats, in 2022 within the study area there were 5308 heads, representing 20% and 14% of the provincial and regional population, respectively. What was said for sheep also applies to goats: the scarcity of data from 2010 to 2014 has led to an increase in the number of goats reared in the area of 2084% in the last decade. On the contrary, considering the period 2015–2022, this amount recorded an increase of 15%, slightly lower than the increase recorded at the provincial (+19%) and regional level (+29%) (Figure 7).

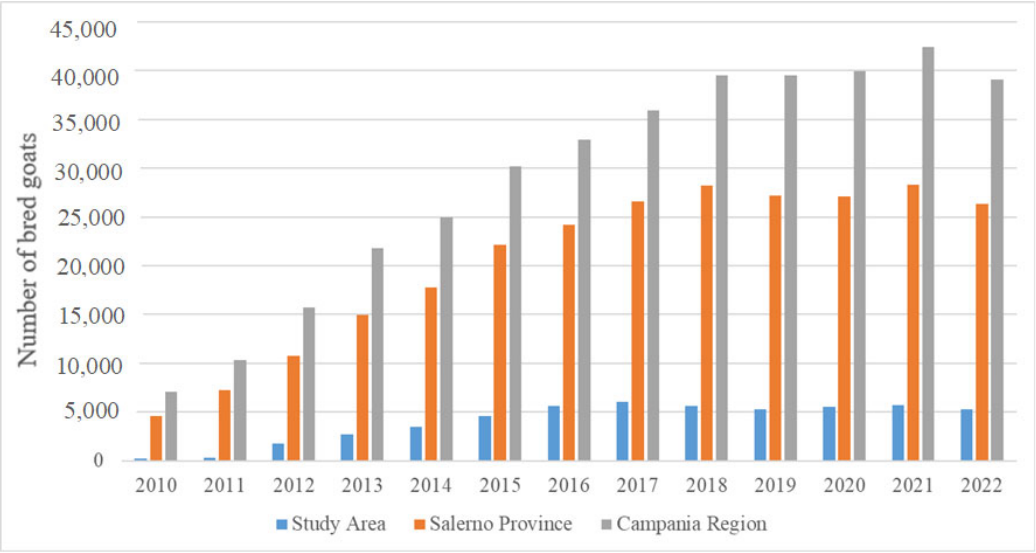

Figure 7. Time trend of the number of bred goats in the study area, in Salerno Province, and in Campania Region.

As regards the production orientation of flocks of goat, 70% were farms producing both milk and meat (mixed), while 30% were meat farms. As seen for sheep breeding, goat farms specialized in the production of milk were absent. Mixed goat herds accounted for

16.5% of the provincial data and 13.5% of the regional one. Meat farms, on the other hand, accounted for 12% of the provincial data and 7% of the regional one.

3.2. The Results of the Sample Survey

This paragraph reports the results of the field survey carried out in 52 livestock farms, namely, the representative sample of the study area.

3.2.1. Characteristics of the Entrepreneur

The entrepreneur is a key organizational figure within the farm, through which management and organization choices are finalized. Generally, entrepreneurs who have a higher level of education and with specific skills bring innovation to farm organization systems that are better suited to modern production systems [12].

The analysis of the data acquired from the sample survey showed that only 38% of the entrepreneurs interviewed were under the age of 40. The most representative class was that between 51 and 60 years old and four entrepreneurs were over 60 years old. Therefore, the breeders of this area were people over 40 years of age with consolidated experience and knowledge, often acquired by being self-taught, for the management and carrying out of their farm activity.

Another important feature was the level of training of the entrepreneurs, which contributes significantly to the development and growth prospects of the business. In fact, almost all the interviewees had a middle and upper secondary school qualification, while both university graduates (advanced) and those with a basic level of education were scarce. Among those with an upper secondary school education qualification, 55% had a first-grade middle school qualification, while the remaining part had a qualification attributable to second-grade middle school (professional qualifications and diplomas).

3.2.2. The Labor and Its Organization

Since the area under study generally was dealing with small and medium-sized farms, the necessary work was provided almost exclusively by the farmer, who was joined by his family members when necessary. Indeed, the survey revealed that in 12 farms, the entrepreneur provided the necessary work, and in 36, there was the simultaneous commitment of both farmer and family labor. The presence of wage workers was found only in three farms.

A typical feature of the labor carried out in the study area, as in the rest of Cilento, was the diffusion of multiactivity. In fact, 41 farmers carried out both livestock management and other agricultural activities, such as land cultivation, forage production, olive growing, etc.; nine entrepreneurs, on the other hand, were engaged in non-agricultural activities (particularly construction and tourism). In many cases, the labor was seasonal or occasional and always in support of the breeding activity. Only in two cases was the entrepreneur already retired.

In 10 farms, activities related to animal husbandry were found, such as agritourism, farm transformation of products, and educational farms. These activities are expanding with the aim to integrate the proceeds of traditional agricultural activities which are generally not sufficient for an adequate income. In addition, the studied territory has a strong tourist vocation in the coastal strip especially in the summer season, which therefore represents the only period of the year with a significant labor demand.

During the survey, the presence of farms with butchers was found, which were in the same municipalities where the farms were present. This finding was remarkably interesting and only affected herds. Indeed, there were no flocks where the owner had a butcher's shop.

Another significant phenomenon recorded in the area was the scarce number of farmers enrolled in NSSI as agricultural entrepreneurs. According to the survey, 50% of the breeders surveyed were not registered. This data confirmed the marginality of the breeding activity within the farms interviewed: often, the value of the gross salable production was below the minimum necessary to access the NSSI management.

3.2.3. Structure and Organization of Farms: The Characteristics of Husbandry

Three types of husbandries have been identified: those with only cattle (24), those with only sheep and goats (15), and those mixed, with cattle and sheep and goats (13). Consequently, each type of farming implied a distinct organization.

As highlighted by the census analysis, the species under study were raised almost exclusively to produce meat, but little of this production reaches the market, while the production and processing of milk was limited to self-consumption or at most linked to gifts or labor exchange. Moreover, milk production was increasingly relegated to flocks, while herds were specialized in the production of meat or restock of animals.

Traditionally, in Cilento, the husbandry system of the species under analysis was extensive and semi-extensive (Figure 8), as confirmed by the survey data. In fact, only three herds had animals raised with the stable system. Often, in extensive and semi-extensive herds, there were some categories that were raised in a stable regime, attributable almost exclusively to animals for meat production, animals for slaughter (calves, heifer, bulls, etc.) while the reproducers were raised in the free state.

Figure 8. Grazing animals in the study area.

Being livestock farms in extensive and semi-extensive states, most of the feed requirements of the raised animals was supplied by pasture. In general, grazing feed supplementation concerned simple and compound industrial feed and fodder. On the contrary, the production of animal feed on farms concerned 44 farms: 37 produced only forage, and in the remaining 7 farms, cereals and grain legumes were produced. At the same time, the farm production of feed covered the total requirement for animal feed in 8 farms, in 20 more than 50%, and in 16 less than 50%. Therefore, a critical aspect of these farms was concerned with the need to source feed from outside, such as cereals and legumes, which were often an integral part of the diet of these animals.

With reference to the land used for farming, in eight cases the land was owned, in five, rented, while in two, the farming took place on state-owned land. Consequently, the most widespread form was the mixed one, where the different components were present, and this concerned 37 farms. Therefore, in the analyzed farms, the ownership of land was varied, and very often, the public domain played a driving role in providing the feed necessary for farming or in covering feed needs.

3.2.4. The Structure of the Farm

Traditionally, the husbandry system greatly affects the corporate structure. Since animals lived mainly in the extensive and semi-extensive state, the analyzed farms did not have an important structure. In fact, the only structures present were the stables and shelters. In many cases, the animals were raised in makeshift shelters. In addition to stables and shelters, in 39 farms, there were also barns and feed storage depots. The typical husbandry almost exclusively had a shed for sheltering the animals and barns to store feed. In most cases, there were no sheds for machinery and agricultural tools, and other structures such as manure pits were found only in nine farms. The transformation of the milk was present only minimally because it was intended for self-consumption, consequently, no rooms used for the transformation of the milk were found.

With reference to the supply of water, both for feeding and for sanitation, the main form of supply was natural springs, which occurs in 36 farms out of 52, where they were the only source of water available. The other sources of supply were the public aqueducts, present in 11 farms; mixed forms of supply (in four farms), and in one case, the presence of cisterns used for water storage was found.

3.2.5. Productions and Future Prospects

In agreement with what was seen from the NLR analysis, the main production of the farmers interviewed was the meat, understood as animals intended for slaughter and animals intended for husbandry (restock animals). Slaughter concerned beef cattle, including waste animals or animals at the end of their career, and sheep and goats not older than six months. In particular, 27 farms had an exclusive production and selling of meat, 22 had meat for slaughter and stable animals, and 2 had both milk and meat. These last farms were dealing with flocks (Table 1).

Table 1. Products sold by the interviewed livestock farmers.

Farming Type	Only Restock	Only Meat	Mixed (Meat and Restock)	Mixed (Milk and Meat)	No Production	Total
Cattle	3	4	13		4	24
Sheep and goats		12		1	2	15
Mixed (with cattle, sheep, and goats)		2	9		2	13

In reference to the question, "How worried are you about the current economic situation?", it emerged that 35 farmers were very worried about the future, almost all cattle breeders; 14 farmers were on average worried, and only three farmers were a little worried. The greatest concerns have been expressed about the production of stabled animals, as this market is dynamic and constantly evolving, especially for the quality of the animals produced. Furthermore, the reduction of public contributions, which in past decades has encouraged the increase in cattle, could lead to the disappearance of many farms because they can hardly maintain themselves economically. This is also aggravated by the increasingly strong competition from Italian (especially from Veneto, Lombardy, and Trentino regions), European, and global productions which tend to keep the selling prices of the products low.

On the contrary, sheep and goat farmers showed moderate concern about the dynamics of the market, as they turn to a purely local market which has now reached a certain stability and, according to the interviewees, they do not expect major fluctuations in the future. From this point of view, it can be said that sheep and goat husbandry is more reliable as an income activity than cattle husbandry.

4. Discussion

From the interviews, in accordance with the survey carried out by analyzing the NLR database, it emerged that the small and medium-sized livestock farm is the most widespread in the study area. The breeders are almost all over 40 years of age, with middle and high school qualifications, and consolidated experience. In addition to the passion for carrying out this activity, they also inherit the practices for husbandry and therefore the changes appear completely marginal. These aspects, related to the lack of a generation of young people (sons or other family members) for the continuation of the breeding activity, determine a static nature both in terms of production and management of the farm.

The workforce involved in the surveyed farms is mainly the family one, which supports the farmer and replaces him in times of need. Often, these are people engaged in other activities with medium-low level of training. Salaried labor is not very present, as this depends on the modest size of the flocks and herds of cattle and, where present, deals with occasional and unskilled workers.

To understand the characteristics of current agriculture and animal husbandry in the study area, we need to take a long-term historical look. At the end of the 19th century, the state of agriculture in Cilento reflected a series of conditions that characterized a large part of the agriculture in Southern Italy at the time: archaic and low-productive forms of management (large estate, improvement contract, partial colony); extensive and unprofitable crops (graminaceous); limited circulation of capital, both for the operation and for the improvement of the funds, and inefficient irrigation systems and soil exploitation with many uncultivated areas due to lack of reclamation and land settlements [13]. In this scenario, animal husbandry has been the weak element in the economic development of these territories for most of their history. In fact, with the significant demographic increase recorded in the southern Italian countryside in the 19th century and the food demand that followed, new extensive crops took the place of grazing meadows. The notorious shortage of capital in this countryside, which made the immobilization of resources for animal housing extremely risky, gave the phenomenon of transhumance a surprisingly long life. Moreover, the spatial isolation of many southern Italian communities resulted in an economic isolation with the impossibility of trading many of the animal products. The historic lack of developed forage cultivation and, more generally of a rational diet, significantly affected both the productivity per animal and the reproduction of the species with consequent neglect of livestock selection [6].

All of this aforementioned is the description of a zootechny, which apart from some southern areas, remained almost of subsistence for a long time, conceived as a marginal activity to the agricultural one and often at its service (for example, draft animals). Later, Palladino [14] recognized the Cilento animal husbandry as a subordinate role but strategic for the formation of farmers' incomes. Indeed, there was a numerical increase for all segments of the sector, even if the most marked growth was above all for cattle, followed by sheep and goats. However, this numerical growth did not lead to an entrepreneurial transformation of livestock activities. In fact, it was still a family-run animal husbandry, not unlike what was revealed seventy years earlier by the Jacini investigation [13]. Another element of continuity with the previous survey was the concentration of sheep and goats in the mountainous areas of Cilento which denoted a specificity and a productive vocation that had been preserved over time [6].

This model based on self-consumption, is very primitive, linked to subsistence agriculture, and lasted until the end of the 1980s of the last century. The small size of the farms (20–30 sheep and goats and 1–2 cattle per farm) did not allow the sector to specialize. Indeed, in 1950, the Italian State significantly accelerated the transformation of the Italian countryside with the launch of the agrarian reform and the institutionalization of the institution called "Cassa del Mezzogiorno". The objective of this institution was to quickly lay the foundations for a rapid convergence of the southern economy with the northern one, through a series of 'direct' interventions aimed at providing the territories of Southern Italy with the so-called preconditions for development; first of all, the infrastructures. At the same time, in the various areas of Cilento, there was an inequality in economic and temporal terms. In fact, in the period 1950–1960, the study area received only two land improvement interventions, only 11 were complete reclamation interventions, and almost all these reclamations concerned only the electrification of rural districts and their realization took place in the following decade (1960–1970). The municipalities of this area not only did not receive a real action to arrange the territories, but they also accumulated a delay compared to other areas of Cilento. Therefore, this determined the emergence of a two-speed growth system in the Cilento area [6].

As regards animal husbandry, there was an even more circumscribed action in time and space. In fact, the lack of an organic policy of intervention in the territories of the lower Cilento, especially in the mountainous areas, together with the lack of substantial stimuli and comparative advantages on the part of the farmers, determined the crystallization of the husbandry models for self-consumption. Only since the 1990s has there been a process of change with a diversification of the production, whereby cattle husbandry,

almost exclusively for meat, has begun to be more and more a specialized livestock activity, relying on incentives and public contributions linked to the various regional agricultural development plans. The disbursement of public contributions was one of the factors that promoted the spread of livestock farms. Thus, a lot of farms were born, many of which were in the wake of the possibility of accessing non-repayable aid not linked to investments [6].

The NLR database showed that in the last decade, in the area under study, but also at the provincial and regional level, the number of animal husbandry has decreased, especially the herds. If the number of cows in the study area remained almost constant, it decreased at the regional and provincial level. As regards the number of sheep and goats, the first decreased or remained almost the same (at provincial and regional level), while goats increased everywhere. These trends are explained by the fact that public intervention in the last decade, both at national and regional level, has directed income aids/incentives to the dairy cattle and buffalo sector (especially the latter), which are widely spread in the Piana del Sele (a vast fertile and luxuriant plain in the province of Salerno) and not in the mountainous part (Cilento area) [15]. Moreover, another cause of this reduction can be found in the depopulation of the hilly and mountainous areas of the Campania Apennines and consequently, also in the study area [16].

Despite these characteristics, and in some cases the permanence of archaic husbandry methods, in the study area, the breeders play a key role for the conservation and enhancement of local animal and plant genetic resources at risk of extinction, which is one of the priorities of the agricultural and environmental policy of the European Union [4,17,18]. Indeed, at national level, the law No. 194/2015 [19] started the creation of a national system consisting of the National Registry and the Biodiversity Portal of agricultural and food interest, in order to preserve, in situ and ex situ, the local species (animals, plants, and microbial) of agri-food interest at risk of extinction and/or genetic erosion. Thus, the Campania Region with the regulation No. 6/2012 [19] and the decree No. 87/2018 [20] established the Regional Repositories of Animal Genetic Resources and introduced the figure of the Keeper Breeder, that is, breeders who are committed to conservation, within the context of farm, that is, in situ, of local animal genetic resources subject to risk of extinction or genetic erosion.

As in other protected areas, also in the area under study, the breeders play an important multifunctional and territorial role since they adopt traditional husbandry techniques compatible with the needs of nature conservation. The livestock activity is not aimed at the production of generic food products, but is oriented towards maintaining local and typical productions, even if they rarely reach the market.

Moreover, from the interviews, it emerged that the most widespread husbandry system was that of extensive and semi-extensive, allowing to preserve the natural balance of the grasslands and the entire ecosystem. In fact, by grazing, the animals open the scrub and keep the vegetation free from the advancement of the bush, reducing the risk of fires and hydrogeological instability. The breeder therefore becomes an element of extreme importance for the conservation of pastures and native breeds and a figure of being a guardian of the territory [21].

In recent years, autochthonous breeds of livestock interest are at risk of extinction because they are no longer bred as non-local; more productive and profitable breeds are preferred [4]. On the contrary, keeping alive the extensive husbandry of local breeds means preserving the exceptional heritage of biodiversity, flora, and pollinating insects which the pastures preserve. From the interviews, it emerged that local breeds are still bred in the study area: as regards cattle, the *Podolica*, while as regards sheep and goats, the *Cilentana*.

With reference to concerns for the future, the recent increases in production costs are of particular concern to cattle farmers. In fact, the analysis showed that most of the livestock farms interviewed have their main source of income outside the farm and many even outside the agricultural sector. A large part of these farms is for self-consumption, few have declared that they sell partially or completely their production, essentially meat or

restock animals, and in very few, the domestic production of animal feed (forage, cereals, and grain legumes) covers the total requirement for animal feed.

In recent years, new livestock farms are born with the main objective to benefit from the incentives provided by the Rural Development Plan (RDP) and, in particular, those linked to young farmers. These initiatives have made it possible to consolidate some activities and improve management and integration within the local supply chains of herds and flocks [6]. Consequently, the authors believe that the livestock sector in the study area may have interesting development perspectives if it intercepts the growing attention of consumers for products of livestock farms fed in a healthy and safe way thanks to the territorial plant biodiversity. These are products in which, even if not analyzed in this research, it is possible to recognize sustainability, authenticity, and integration with the natural environment of the territory. The challenge for these farmers is to be able to stay on the market, to sell products, but above all, provide services at adequate prices. Furthermore, it is important to complete the production chain to 'close the cycle', adding to the husbandry, transformation, and direct sale of the products—dairy and/or cured meat factory with sales point, butcher's shops—also having facilities equipped for tasting/consumption of products (from cheese to meat and cured meats). Another strategy could be to extend their activities to those of catering, agritourism, and experiential tourism to reposition themselves in the value chain and close the cycle that goes from production to final consumption. Basically, in order to thrive, the livestock farms in the study area must abandon the logic of the market for livestock products and offer a gastronomic, rural, and experiential tourist service; not simply being production farms, but multifunctional ones, which consciously set themselves the goal of giving those people who want to go to the Cilento internal territory the opportunity to discover it and to experience it. Hence the need to reinvent themselves and equip themselves to become a point of attraction and understand the type of services they must offer to stay within the large container of rural and experiential tourism, as is already the case in other parts of the world. For example, Di Domenico and Miller [22] took an in-depth qualitative research approach to examine the pressures, choices, and challenges faced by UK farm families who have developed tourist attractions on their farms, and how it positively affects farm family members' own sense of identity. Razzaq et al. [23] in Malaysia explored the process of community capacity building particularly on the aspect of awareness, knowledge, and skills as well as attitude of the rural community that enable them to involve themselves in tourism planning. Salvatore et al. [24], in Italy, examined the relationship between "rural peripherality" and "tourism transition" to describe the ongoing transformations within the tourist supply in rural areas. Cucari et al. [25] investigated the *Albergo Diffuso* ("scattered or dispersed hotel") as an example of sustainable community-based entrepreneurial land use, affirming that it represented an interesting interpretation of sustainable "Made in Italy" tourism. Kastenholz et al. [26] analyzed the impact of sensorial experiences (distinguishing sight, sound, smell, and touch) on positive emotions (delight and relaxation, for high versus low arousal) and place attachment, additionally distinguishing tourists from excursionists in three Portuguese hinterland villages. Sardaro et al. [27], to help policy makers in identifying suitable conservation strategies, investigated the attitude of different categories of stakeholders (owners and the community) to collaborative approaches for the conservation of the most representative type of historical rural building in Apulia, southern Italy, that is, the *masseria*. Yi-Man Teng et al. [28] examined the positive impact of rural winery visitors' motivation on experience associations such as emotion, trust, and loyalty in Taiwan. Chen et al. [29] investigated the relationship between rural tourism experience and tourists' post-experience green consumption intention in China. Moreover, a survival strategy for the different breeders of the study area could be to give greater value to transhumance [30,31]—a practice that has recently become an UNESCO heritage site—which can become an attractive tourist–cultural experience that can produce additional income for the farmer and his farm.

5. Conclusions

The analyzed farms are guardians of the territory and environmentally sustainable, with respect to other forms of more intensive industrial husbandries. However, their survival is linked to the development of new forms of local economy, such as the definition of an experiential rural tourist offering, in which the presence of institutions plays a fundamental role. At the same time, regarding the farm organization, generational turnover should be encouraged, linking the Common Agricultural Policy premiums to training courses for new breeders, as well as encouraging the production of forage through the stipulation of contracts with food manufacturers of organic products present in the area.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/su15107863/s1, File S1—The questionnaire.

Author Contributions: Conceptualization, M.C. and M.P.; methodology, M.C.; validation, M.C. and M.P.; formal analysis, G.B.; investigation, A.I. and G.B.; resources, M.C.; data curation, G.B.; writing—original draft preparation, M.P.; writing—review and editing, M.C.; visualization, M.C., G.B., and A.I.; supervision, M.C.; project administration, M.C.; funding acquisition, M.C. All authors have read and agreed to the published version of the manuscript.

Funding: This research was partially funded by "PSR Campania Region 2014–2020, Nobili Cilentani Project: Applicazione del metodo nobile ad alcune produzioni zootecniche cilentane"; Unique Project Code: E66B19000630009.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Not applicable.

Acknowledgments: We are grateful to the interviewed breeders for giving us access to their field data.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Cortignani, R.; Buttinelli, R.; Dono, G. Farm to Fork strategy and restrictions on the use of chemical inputs: Impacts on the various types of farming and territories of Italy. *Sci. Total Environ.* **2022**, *810*, 152259. [CrossRef] [PubMed]
2. Farm to Fork e Biodiversità 2030. 2020. Available online: https://zootecnica.it/2020/05/26/farm-to-fork-e-biodiversita-2030/ (accessed on 3 January 2023).
3. Feng, L.; Aryal, N.; Li, Y.; Horn, S.J.; Ward, A.J. Developing a biogas centralized circular bioeconomy using agricultural residues—Challenges and opportunities. *Sci. Total Environ.* **2023**, *868*, 161656. [CrossRef] [PubMed]
4. Fortina, R. Razze e Parchi: La Zootecnia Nelle Aree Protette Italiane. Associazione RARE. 2019. Available online: https://www.associazionerare.it/razze-e-parchi-la-zootecnia-nelle-aree-protette-italiane/ (accessed on 10 December 2022).
5. De Falco, E.; Rigano, D.; Fico, V.; Vitti, A.; Barile, G.; Pergola, M. Spontaneous Officinal Plants in the Cilento, Vallo di Diano and Alburni National Park: Tradition, Protection, Enhancement, and Recovery. *Plants* **2023**, *12*, 465. [CrossRef] [PubMed]
6. Salvatore, D.; Cerrato, M. Fermo ma non inerte. Agricoltura e zootecnia del Cilento alla prova dell'intervento pubblico straordinario (1945–1992). *Quad. dell'Archivio Stor.* **2021**, *1*, 129–170.
7. Gal Casacastra, Il Paesaggio Naturale. Available online: https://www.galcasacastra.it/territorio/ (accessed on 13 January 2023).
8. L'importanza Della Zootecnia Nel Territorio Locale. Available online: https://nobilicilentani.com/2021/05/14/limportanza-della-zootecnia-nel-territorio-locale/ (accessed on 10 November 2022).
9. NLR. Anagrafe Nazionale Zootecnica—Statistiche. Ministry of Health. 2022. Available online: https://www.vetinfo.it/j6_statistiche/#/ (accessed on 8 October 2022).
10. Zheng, G.; Wang, Q.; Cai, C. Criterion to determine the minimum sample size for load spectrum measurement and statistical extrapolation. *Measurement* **2021**, *178*, 109387. [CrossRef]
11. Arnab, R. *Survey Sampling Theory and Applications*, 1st ed.; Elsevier: Amsterdam, The Netherlands, 2017.
12. Gregori, M. *Introduzione All'economia ed Elementi di Economia Agraria*; UTET Università: Torino, Italy, 2021.
13. Passaro, A.R. *Il Cilento Nell'inchiesta Agraria Jacini*; Galzerano Editore: Casalvelino, Italy, 2005.
14. Palladino, F. *Aspetti e Problemi Dell'agricoltura Cilentana*; Tip. del Senato: Rome, Italy, 1956.
15. Cannata, G. *Le Grandi Trasformazioni Economiche Dell'agricoltura Italiana Contemporanea, in AA.VV., Le Fonti Archivistiche Dell'agricoltura Italiana per la Ricerca Storico-Geografica*; Accademia Nazionale delle Scienze Detta dei XL: Rome, Italy, 2019; pp. 13–29.

16. Assessorato Agricoltura Regione Campania, 2021. Progetto AMiCA: Azioni a Sostegno delle Microfiliere Zootecniche per La valorizzazione delle Risorse Genetiche Campane Autoctone e delle Relative Produzioni. Available online: http://agricoltura.regione.campania.it/comunicati/comunicato_04-08-21B.html (accessed on 24 April 2023).
17. Stampa, E.; Schipmann-Schwarze, C.; Hamm, U. Consumer perceptions, preferences, and behavior regarding pasture-raised livestock products: A review. *Food Qual. Prefer.* **2020**, *82*, 103872. [CrossRef]
18. LAW 1 December 2015, n. 194, Disposizioni per la Tutela e la Valorizzazione Della Biodiversità di Interesse Agricolo e Alimentare. Available online: https://www.gazzettaufficiale.it/eli/id/2015/12/11/15G00210/sg#:~:text=LEGGE%201%20dicembre%202015%2C%20n.%20194%20Disposizioni%20per,11-12-2015%29%20note%3A%20Entrata%20in%20vigore%20del%20provvedimento%3A%2026%2F12%2F2015 (accessed on 24 April 2023).
19. Regulation of the CAMPANIA Region 3 Luglio 2012, n. 6, Regolamento di Attuazione Dell'articolo 33 Della Legge Regionale 19 Gennaio 2007, n. 1 (Disposizioni per la Formazione del Bilancio Annuale e Pluriennale Della Regione Campania—Legge Finanziaria Regionale 2007), per la Salvaguardia Delle Risorse Genetiche Agrarie a Rischio di Estinzione. Available online: https://www.consiglioregionale.calabria.it/upload/istruttoria/7Reg%20REG.%20CAMPANIA%20N.%206-2012.pdf (accessed on 24 April 2023).
20. Decree of the CAMPANIA Region, n. 87, 18/06/2018, Elenco Regionale Coltivatori Custodi—Sezione Animale: Approvazione Modello di Iscrizione e Avviso Pubblico (Con Allegati). Available online: http://agricoltura.regione.campania.it/biodiversita/doc/DRD_87-18-06-18.pdf (accessed on 24 April 2023).
21. Wang, B.; Yan, H.; Zhang, Q. Reciprocity of grassland conservation and pastoralist livelihoods: Evidence from comparison between developed and developing regions. *Ecol. Indic.* **2022**, *144*, 109517. [CrossRef]
22. Di Domenico, M.L.; Miller, G. Farming and tourism enterprise: Experiential authenticity in the diversification of independent small-scale family farming. *Tour. Manag.* **2012**, *33*, 285–294. [CrossRef]
23. Razzaq, A.R.A.; Mohamad, N.H.; Kader, S.S.S.A.; Mustafad, M.Z.; Hadi, M.Y.A.; Hamzah, A.; Khalifah, Z. Developing Human Capital for Rural Community Tourism: Using Experiential Learning Approach. *Procedia Soc. Behav. Sci.* **2013**, *93*, 1835–1839. [CrossRef]
24. Salvatore, R.; Chiodo, E.; Fantini, A. Tourism transition in peripheral rural areas: Theories, issues and strategies. *Ann. Tour. Res.* **2018**, *68*, 41–51. [CrossRef]
25. Cucari, N.; Wankowicz, E.; De Falco, E.S. Rural tourism and Albergo Diffuso: A case study for sustainable land-use planning. *Land Use Policy* **2019**, *82*, 105–119. [CrossRef]
26. Kastenholz, E.; Marques, C.P.; Carneiro, M.J. Place attachment through sensory-rich, emotion-generating place experiences in rural tourism. *J. Dest. Mark. Manag.* **2020**, *17*, 100455. [CrossRef]
27. Sardaro, R.; La Sala, P.; De Pascale, G.; Faccilongo, N. The conservation of cultural heritage in rural areas: Stakeholder preferences regarding historical rural buildings in Apulia, southern Italy. *Land Use Policy* **2021**, *109*, 105662. [CrossRef]
28. Teng, Y.M.; Wu, K.S.; Wang, W.C. Exploring rural winery loyalty: The effect of visitors' experience in Taiwan rural winery tourism. *J. Rural. Stud.* **2022**, *96*, 32–41. [CrossRef]
29. Chen, J.; Huang, Y.; Wu, E.Q.; Ip, R.; Wang, K. How does rural tourism experience affect green consumption in terms of memorable rural-based tourism experiences, connectedness to nature and environmental awareness? *J. Hosp. Tour. Manag.* **2023**, *54*, 166–177. [CrossRef]
30. Mastronardi, L.; Giannelli, A.; Romagnoli, L. Detecting the land use of ancient transhumance routes (Tratturi) and their potential for Italian inner areas' growth. *Land Use Policy* **2021**, *109*, 105695. [CrossRef]
31. Ruiz, M.; Ruiz, J.P. Ecological history of transhumance in Spain. *Biol. Conserv.* **1986**, *37*, 73–86. [CrossRef]