

Proceeding Paper

Pastoral Schools: Diffusing the Italian and Spanish Experience for Sustainable Mediterranean Pastoralism through Co-Creation [†]

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Abstract: Pastoralism constitutes an extensive livestock system offering a feasible alternative toward agro-ecological transition. People who are engaged in the sector are expected to have a high level of skills related to knowledge and experience of nature and climate, management of resources, and other significant elements that comprise Traditional Ecological Knowledge. The purpose of this paper is to present the emergence and operation of “Pastoral Schools” in various Mediterranean countries, which offer training to people who wish to be professionally involved in pastoralism. In particular, the co-creation approach that takes place within the PASTINNOVA project is presented, which involves the establishment of Regional Living Labs bringing together actors from several Mediterranean countries who are interested in analyzing the operation of pastoral schools, exchange relevant experiences and knowledge, and deliver solutions that will upscale the performance of these schools and permit their operation to be expanded in other Mediterranean settings.

Keywords: Innovations and Business Models; Traditional Ecological Knowledge; extensive livestock production



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1. Introduction

A pastoral system is a complex structure emerging from interactions of raising livestock and utilizing natural resources, in which breeders share production purposes, traditions, and cultural values [1]. Pastoral systems in the Mediterranean share three features: agro-ecological constraints; traditional socio-cultural roles; and the potential to foster sustainable entrepreneurship. A particular element at the nexus of these three components is the Traditional Ecological Knowledge (TEK) related to pastoral systems. According to [2], TEK “... consists of the body of knowledge, beliefs, traditions, practices, institutions, and worldviews developed and sustained by indigenous, peasant, and local communities in interaction with their biophysical environment”. TEK involves knowledge about the environment that is based on practice and experience and is transmitted across generations [3]. This body of knowledge is used for the livelihoods of populations that evolved from it. Particular elements of TEK include biophysical observations, management practices, institutions, values, and beliefs [4]. Domains of particular interest for pastoral-related TEK are the management of natural resources (land, rangelands, and vegetation); traditional

routes and practices related to flock mobilities; knowledge about weather and climate; flock management practices (feeding, grazing, milking, animal health); farm labor and the allocation of roles and task allocation among workers; typical products and transformation practices; and social norms, customs, and traditions [5].

Working on a pastoral farm is not an easy task and requires a high level of specific skills. In intensive systems, workers are expected to be familiar with modern technologies and automated systems, as well as innovative methods of monitoring animal health and product quality. In addition, farm managers must anticipate market conditions and maintain a high level of communication and information. In pastoral systems, such skills must also be complemented by TEK in order to be able to resolve unexpected situations and risks (e.g., predators and extreme weather phenomena). This employment implies very harsh living and working conditions, isolation, and limited access to basic services, while pastoralists must be aware of their role in managing public goods and providing ecosystem services. Over the centuries, TEK has been an asset used to manage these issues. Work with owners of pastoral farms showed that they appreciate the skills of salaried migrant workers related to TEK [6].

Acknowledging the specificities of pastoral systems compared to intensive ones, as well as the importance of TEK for pastoralism, “Pastoral Schools” (PS) have been established in several Mediterranean countries (Italy, Spain, France), while the need to introduce them in other countries is becoming more and more evident. This issue will be examined within the PASTINNOVA project along with other Innovations and Business Models (IBMs).

2. Methods

Within the framework of the PASTINNOVA project, a wide variety of IBMs will be considered, which have been grouped into four thematic clusters. The project proposes a co-creation approach based on the theory of Living Laboratories [7]. Because of their importance and relevance, pastoral schools have been selected as a priority IBM for Mediterranean pastoralism through an open approach among all PASTINNOVA partners and related actors, and the common network of PASTINNOVA will provide a forum to upscale their performance and expand their operation across the Mediterranean basin. The specific context that lies at the foundations of this IBM is the fact that generational renewal is one of the most relevant challenges for pastoralism at present; however, at the same time, there is an increasing will by urban dwellers to go back to nature and rural lifestyles. The co-creation process will involve actors from existing successful examples of PS operations in Spain (Catalonia) and Italy (Piedmont/Lombardy, Sardinia, and Tuscany), as well as Greece, Algeria, and potentially from other countries in order to examine ways to disseminate and transfer know-how to countries where this IBM presents lower levels of maturity.

3. Results and Discussion

The Catalan Shepherd School is a school to train new pastoralists. This PS is addressed to all people who wish to be involved in pastoralism. Although some of the students have family traditions in pastoralism, most of them do not. It has been running for the last 14 years, which demonstrates that there is already a significant level of maturity and accumulated experience. The rationale behind the operation of the Shepherd School is to understand the real needs of pastoralists and provide them with training that will deliver solutions to these needs. To achieve this, there is a team of people behind the whole organization who address the needs of trainees while also performing follow-up surveys and training even after the main training period. The main challenge being addressed by the Catalan Shepherd School is generational renewal, which is actually the major problem for pastoralism in Spain in general. Nevertheless, it remains a challenge for trained people to actually start a new business because of constraints, such as land access, machinery acquisition, and capital availability. In addition, organizational problems, such as low funding, remain.

The “National School of Pastoralism” in Italy (Scuola Nazionale di Pastorizia, SNAP) aspires to provide elements of “training, information, innovation and dialogue” and proposes itself as modular, itinerant, and interactive. The SNAP was born from the recognized need by both sector operators (farmers, technicians, and researchers) and the local communities of the internal areas to think of a new figure of pastoralists, no longer only as food producers but also as providers of ecosystem services for the communities themselves. With this aim, a working group comprising research institutions, universities, associations, and extension services from across the country was created to develop a shared training model. As in Spain, the key challenge was to tackle generational renewal problems combined with the objective to facilitate the adoption of the necessary technological, organizational, and social innovations to combine income objectives, good management of ecosystems, and preservation of cultural identity. The SNAP model was the initial reference for various initiatives in Italy that are and will be active in different geographical/socio-economic contexts, including one in Northern Italy (Lombardy and Piedmont regions), financed with private and public funds, one in Sardinia, totally financed from regional funds, and one in Tuscany, funded by a LIFE project. These schools are open to women and men interested in undertaking this activity who may be workers in other sectors, unemployed, or students, as well as to managers of extensive livestock systems, breeders, shepherds, and cheese makers. From the SNAP perspective, the school does not exhaust its activities in the educational field, it also wants to be a place of both technical and social innovation (including exchange of information, organization of events, initiatives of territorial animation), thus providing an opportunity to enhance the territories and convey knowledge, awareness, and value regarding pastoralism and, therefore, rights and resources for those who practice it. Attendants will be awarded a certificate of attendance valid for the purposes of professional placement and/or continuation of studies in national and international companies/institutions. The final objective will be the official recognition of the professional figure of the shepherd in the regional registers of professions.

In Greece, there are no schools dedicated to pastoralism-related vocational training. Farm vocational training is offered to young high school graduates who want to be employed in farms and businesses in the agri-food sector. Six (6) public Vocational Training Institutes (DIEKs) offering seven (7) curricula to interested students operate in several parts of Greece under the jurisdiction of the Ministry of Rural Development and Food and the operational responsibility of ELGO-DIMITRA. The content and supervision of the curricula are formulated by the Ministry of Education and Religious Affairs. Out of the seven curricula, two are focused on livestock production: “Dairy technician–Cheese maker” (DIEK Ioannina) and “Livestock systems administration” (DIEK Larissa). Although currently there are no specific domains targeted to pastoralism, the experience of other countries could provide an alternative to develop such training activities for people who could be interested in the profession.

4. Conclusions

During the co-creation approach in PASTINNOVA, important exchanges are expected to be developed among partners from Mediterranean countries, including the organization of field visits and exchange excursions of stakeholders. There is also a linkage with other activities and Organizations; for instance, the Greek Ministry of Culture is particularly interested in the integration of TEK in vocational training.

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