

TRAINING NEEDS FOR PEOPLE INVOLVED IN EXTENSIVE LIVESTOCK FARMING

Information to be collected for IO1: Shepherd's curriculum

Date 01/08/2021
Version 2



 Co-funded by the
Erasmus+ Programme
of the European Union

PARTNERS



Landwirtschaftskammer
Niedersachsen



 HBLFA
Raumberg-Gumpenstein
Landwirtschaft



www.eu4shepherds.eu

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1. Training needs for people involved in extensive livestock farming

Based on knowledge of the training systems in the partner countries, the situation of extensive livestock farming in these countries and interviews with shepherds and livestock farmers, a SWOT analysis has been carried out. The topics discussed are the basis for identifying the main training needs in each country.

1.2. SWOT analysis of existing training:

To address the study of the VET and training of shepherds and extensive livestock, the following areas of action have been taken into account:

- How to join the sector
- Production techniques
- Farm management
- Production methods
- Production valorization
- Application of new technologies
- Current regulatory framework in each country

1.2.1. Austria

How to join the sector	STRENGTHS	OPPORTUNITIES
	S1: varied training offers and advisory support S2: Subsidies are connected with a basic agrarian education S3: Few restrictions on sheep farming, low costs for housing	O1: Increasing acceptance of sheep farming O2: Increasing interest in lamb-meat O3: Increasing interest in dairy products
	WEAKNESSES	THREATS
	W1: Many sideline farms W2: Few restrictions on sheep farming: little knowledge of hobby-farmers W2: Most farms are inherited, difficult for career changers	T1: Predators T2: Increasing intensification of the agriculture T3: rising land prices

Production techniques and farm management	STRENGTHS	OPPORTUNITIES
	S1: low costs for housing S2: Precise specifications for husbandry with regard to animal welfare S3: Different ranges from extensive to intensive production, high flexibility depending on possibility and interest of the farmer S4: big variety of different breeds according to the farm management	O1: perfect grassland converters, lower impact on environment O2: Easy transition from (labour intensive) cattle husbandry to sheep O3: better all-terrain capability and weight for alpine areas => reduction of erosion and avalanche risk O4: Maintenance of high nature value (farm)land

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		O5: shepherds will be needed for herd protection (predators) in future
	WEAKNESSES	THREATS
	W1: Predators W2: contribution margin is lower than for cattle W3: Niche production: less attention to technologisation W4: only few specialized veterinarians W5: little research and development in the field of medicines	T1: Changes in production due to climate change T2: social recognition of cattle and pigs is higher than sheep

Production methods	STRENGTHS	OPPORTUNITIES
	S1: perfect grassland converters S2: often using marginal land S3: no food competitor for human nutrition S4: Seasonality, times with less workload, planability	O1: different production methods can be easily changed O2: Shorter generation interval => more flexibility regarding herd management O3:
	WEAKNESSES	THREATS
	W1: higher production costs than on the global market (stable and fodder conservation for winter) W2: High costs per individual animal due to small structures W3: Slow increase in breeding value due to natural insemination	T1: Seasonality, no current production for marketing T2: extreme intensification => image loss in society T3: loss of efficiency due to strong extensification (environmental impact)

Production valorization	STRENGTHS	OPPORTUNITIES
	S1: Good pricing for (regional) lambs S2: No food competitors S3: A wide range of quality/marketing brands S4: Professional breeding, export of breeding animals S5: Subsidies for endangered farm animals S6: Positive impact on tourism in alpine regions	O1: HALAL meat production O2: Food trend towards sustainability and animal welfare: using positive associations for marketing O3: Increase in the self-sufficiency share for lamb-meat O4: Innovative marketing possibilities for wool: e.g. fertilizer O5: Sheep for social farming – green care
	WEAKNESSES	THREATS
	W1: Marketing of old sheep W2: Less utilization of lamb-wool W3: Loss of subsidies for alpine grazing	T1: Cheap production abroad

Application of new technologies	STRENGTHS	OPPORTUNITIES
	S1: Research projects in Raumberg-Gumpenstein S2: Reduction of workload S3: Reduction of physical work for farmers	O1: More time for diversification O2: Sharing technologies with other farms (costs)

	WEAKNESSES	THREATS
	W1: Niche production: less attention to technologisation W2: Costs for technologies, stronger dependencies	T1: Less contact between farmer and individual animal

Regulatory framework in force in each country	STRENGTHS	OPPORTUNITIES
	S1: Precise specifications for husbandry with regard to animal welfare (Animal Protection Law) S2: High standards in food safety S3: Additional subsidies for sustainable production S3: Well represented by chambers and breeding organisations, interest groups	O1: Good marketing possibilities due to high (controlled) quality O2: Agriculture and tourism combined in one ministry: support even in difficult situation e.g. cow attacks. Etc.
	WEAKNESSES	THREATS
	W1: High administration effort W2: Conflict of interest between farming and hunting W3: Federalism: e.g. animal welfare is a matter of federal states	T1: Getting dependent on subsidies T2: Low competitiveness with the global market due to high production costs

1.2.2. Bulgaria

How to join the sector	STRENGTHS	OPPORTUNITIES
	S1: Extensive pastoral sheepbreeding is traditional practice for the Bulgarians. S2: Enables the involvement of young people in the sector.	O1: Allows inheritance of this technology in the family. O2: Sustainable storage of traditional production.
	WEAKNESSES	THREATS
	W1: Start-up capital is needed to start such a business. W2: Significant disinterest of young people in sheep breeding.	T1: Insufficient awareness of funding opportunities in this sector.

Production techniques	STRENGTHS	OPPORTUNITIES
	S1: Creation of valuable food and non-food products from sheep S2: Work with natural materials and products.	O1: Opportunities to create protected products.
	WEAKNESSES	THREATS
	W1: Weak level of mechanization of basic processes.	T1: To increase the level of mechanization.

Farm management	STRENGTHS	OPPORTUNITIES
	S1: Low investment farming systems in extensively sheepbreeding.	O1: Possibility to obtain sheep products with low cost.
	WEAKNESSES	THREATS
	W1: Poorly developed modern information systems in the herd management.	T1: Implementation of modern computer programs to improve the management of the herd.

Production methods	STRENGTHS	OPPORTUNITIES
	S1: Mostly handmade original sheep products.	O1: Opportunities to create protected local products from sheep
	WEAKNESSES	THREATS

Application of new technologies	STRENGTHS	OPPORTUNITIES
	S1: Implementation of mechanization in basic technological processes in obtaining sheep production.	O1: Increasing the economic efficiency of the herd.
	WEAKNESSES	THREATS
	W1: Insufficient training of farmers in the area of new technology.	T1: Conducting adequate training.

1.2.3. Germany

Farm management	STRENGTHS	OPPORTUNITIES
	S1. Possibilities of information about the counselling centers. S2. Technical knowledge would be available. S3. Cooperations could help with entry.	O1. Ecology and economy could be linked here O2. Border locations could be used well here
	WEAKNESSES	THREATS
	W1. There is a lack of training opportunities for the management of marginal sites. W2. simple technical possibilities should be developed	T1. Animal welfare and daily life must be reconciled T2. Regional availability and acting persons are not congruent

Production methods	STRENGTHS	OPPORTUNITIES
	S1. Production methods need to be rethought S2. Time plays an important factor	O1. Areas and possibilities are available O2. Ecological variants are popular
	WEAKNESSES	THREATS
	W1. Starter packages for initial training are missing W2. The strengths of the region should be pooled	T1. Administrative requirements T2. Ecological thought still established enough

Production valorization	STRENGTHS	OPPORTUNITIES
	S1. Good foundations are available in individual cases S2. The time for ecological production methods is given	O1. Consumers would be ready for the products O2. The know-how would be available
	WEAKNESSES	THREATS
	W1. Differentiation of the product chains is difficult W2. The handling of the initial products is very time-consuming	T1. Cooperations for beginners is lacking T2. Collective action would be necessary T3. Starting in small steps is too difficult
Application of new technologies	STRENGTHS	OPPORTUNITIES
	S1. New approaches are available S2. Technical foundations come from the mountain regions	O1. From large to small would be well possible O2. Promotion of cooperations
	WEAKNESSES	THREATS
	W1. The first step would be necessary to support W2. Mechanization is more about size	T1. Is this really what is wanted? T2. Hurdles in financing too great
Regulatory framework in force in each country	STRENGTHS	OPPORTUNITIES
	S1. Funding opportunities currently possible S2. Green locations are in focus	O1. The new funding period is not defined clearly enough O2. Certainty of action over several years should be ensured
	WEAKNESSES	THREATS
	W1. Coordination across the entire federal states would make sense W2. Coordinate measures with different authorities	T1. The interests are too different T2. Regional and special interests make implementation difficult

Others	STRENGTHS	OPPORTUNITIES
	S1. The boundary sites are available S2. The possible development has good prerequisites	O1. The variation of border locations is not large in Lower Saxony O2. The transport links are good
	WEAKNESSES	THREATS
	W1. Diversity can be a problem W2. The actors would have to agree	T1. Small ruminants are not always at an advantage T2. Society must want it and support it

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1.2.4. Portugal

How to join the sector	STRENGTHS	OPPORTUNITIES
	<p>S1: Recent new schools of shepherds initiatives in Portugal, increasing the specialized training offer.</p> <p>S2: Profession still seen as a natural and traditional way of living, preserved through generations.</p>	<p>O1: Good coverage of the territory by the current agrarian training system.</p> <p>O2: Increasing interest of new entrepreneurs, with non-traditional training backgrounds.</p> <p>O3: New funding opportunities related to pastoralism.</p>
	WEAKNESSES	THREATS
	<p>W1: Lack of specialized training offer in formal and non-formal systems.</p> <p>W2: Family background is the main source; Advanced age of shepherds.</p> <p>W3: Lack of recognition of professional training courses comparing to university degrees.</p>	<p>T1: Lack of private entities interested in pastoralism training.</p> <p>T2: Low recognition of the value of pastoralism as a profession.</p> <p>T3: Strong mental health needed in order to be a shepherd.</p>

Production techniques	STRENGTHS	OPPORTUNITIES
	<p>S1: Use of local breeds is very present.</p> <p>S2: National Plan on Rural fire integrated management highlights pastoralism as a priority of fire prevention.</p>	<p>O1: New wildfire risk mitigation and fuel management funding opportunities.</p> <p>O2: Local breeds associated to product certification (PDO or PGI).</p> <p>O3: New projects such as Cabras Sapadoras (Sapper goats) to value the pastoralism services.</p>
	WEAKNESSES	THREATS
	<p>W1: Lack of available grazing areas of considerable size.</p> <p>W2: Local breeds are not profitable.</p> <p>W3: High mortality of lambs (diseases).</p>	<p>T1: Lack of a banking credit system dedicated to pastoralism.</p> <p>T2: Local breeds have low economic return on investment compared to exotic breeds.</p>

Farm management	STRENGTHS	OPPORTUNITIES
	<p>S1: Extensive pastoralism is associated with organic farming</p> <p>S2: Pastures management through livestock exploitation is an important tool to fire prevention</p>	<p>O1: Cross-border good experiences (from Spain) in pastoralism</p> <p>O2: Controlled fire training in pastoralism</p> <p>O3: New initiative of Land Bank, to facilitate access to available land</p>
	WEAKNESSES	THREATS
	<p>W1: Land reparcelling makes management difficult</p>	<p>T1: Poor pasture management with forest areas</p>

	W2: Conflicts with land owners. W3: Pesticides management and conflicts with shepherds.	T2: Sustainability of pastoralism management is highly related to seed production.
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Production methods	STRENGTHS	OPPORTUNITIES
	S1: Traditional pastoralism in natural pastures (extensive breeding) still present, with local breeds.	O1: Environmental services, such as maintenance of the vegetation under the electric lines is compulsory for electric companies.
	WEAKNESSES	THREATS
	W1: Pastoralism is mainly dependent of cheese production dynamics. W2: Decrease of associated professions of pastoralism (cheese affineur, shearer, etc). W3: Low training in innovative production methods.	T1: Traditional production methods at risk of disappearance. T2: Capacity of shepherds to maintain vegetation is low.

Production valorization	STRENGTHS	OPPORTUNITIES
	S1: Pastoralism can be associated with side projects of high income (beef, hunting, cork, leisure activities, olive, environmental	O1: Increasing touristic interest in the pastoralism way of living (transhumance and cultural events) and in natural and

	<p>services, wine, etc).</p> <p>S2: Recent creation of Vale Pastor (monetary price to shepherds that supply certified cheese factories).</p>	<p>traditional products obtained from pastoralism (wool textiles).</p> <p>O2: Funding opportunities related to circular economy of natural products and pastures/forages.</p> <p>O3: Increasing interest in organic farming products (beef, black pig, sheep milk).</p>
	WEAKNESSES	THREATS
	<p>W1: Products such as wool and manure are not rewarded.</p> <p>W2: Certification of products has to be paid by producers.</p> <p>W3: Low training in production valorization.</p>	<p>T1: Low prices on milk and cheese.</p> <p>T2: Imported raw milk from France.</p> <p>T3: Milk mixtures.</p>

Application of new technologies	STRENGTHS	OPPORTUNITIES
	S1: Majority of shepherds have a mobile phone.	<p>O1: Animal tracking solutions available to shepherds.</p> <p>O2: Online local cheese market places to value products.</p>
	WEAKNESSES	THREATS
	<p>W1: Low skills on ICT.</p> <p>W2: Low incorporation of technology in pastoralism.</p> <p>W3: Lack of economic resources to buy ICT equipments such as</p>	T1: Lack of phone coverage in mountain areas.

	GPS tracking collars and mobile phones. Etc.	
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Regulatory framework in force in Portugal	STRENGTHS	OPPORTUNITIES
	S1: Increasing public awareness of pastoralism value due to fire prevention.	O1: Local breed associations have a good presence near the shepherds (vet services, legal support, etc). O2: New agroenvironmental funding opportunities.
	WEAKNESSES	THREATS
	W1: Huge bureaucracy constraints related to livestock funding (regime for the exercise of livestock activity). W2: Huge bureaucracy constraints related to licencing the stables. W3: Livestock regulations is designed for Pig farming and Poultry.	T1: Bureaucracy constraints have led to a decrease in new shepherds. T2: Lack of shepherds associations or unions in the country (national, regional and locals). T3: Rule of 200 meters distance between urban areas and livestock exploitations.

Others	STRENGTHS	OPPORTUNITIES
	S1: Increasing interest in pastoralism as a way of protecting animal welfare.	O1: 207 PDO products in Portugal. O2: Several research projects happening in Portugal

		related to pastoralism (climate change, mountain ecosystems, controlled fire, etc).
	WEAKNESSES	THREATS
	<p>W1: There are more bureaucracy technicians than shepherds in Portugal.</p> <p>W2: Expensive legal certification of official entities.</p> <p>W3: Conflicts with stray dogs, pesticides, protected wild flowers.</p>	<p>T1: Areas affected by forest fires should be priority shepherds areas.</p> <p>T2: Low available training regarding environment, hygiene and animal welfare.</p>

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1.2.5. Romania

How to join the sector	STRENGTHS	OPPORTUNITIES
	<p>S1: Significantly large agricultural areas with a high share of meadows</p> <p>S2: High potential for crop diversification</p> <p>S3: Wide range of mountain and traditional products.</p>	<p>O1: Increasing demand for agro-food products</p> <p>O2: Bio/ecological production has favorable development prospects</p> <p>O3: The growing demand for quality local and regional products</p> <p>O4: Exposure to global markets (Constanta port), river links with the main EU countries (Danube)</p>
	WEAKNESSES	THREATS
	<p>W1: Low productivity, well below the real potential, especially in the livestock sector</p> <p>W2: Low access to capital and credit</p> <p>W3: Small and medium-sized farms with low levels of inputs used (fertilizers and plant protection products) equipment and an outdated genetic base</p> <p>W4: Unorganized Supply Chain (long distance from farm to market)</p> <p>W5: Lack of marketing and processing infrastructure leading to low revenue</p> <p>W6: Marketing channels unsuitable for small farms</p>	<p>T1: Insufficient absorption of EU funds</p> <p>T2: Political instability</p> <p>T3: Foreign competition (including for green products)</p> <p>T4: Lack of investment and long implementation period of projects needed to modernise rural infrastructure</p>

Production techniques	STRENGTHS	OPPORTUNITIES
	<p>S1: Large but low productivity workforce</p> <p>S2: Opportunities for the development of agro-tourism based on extensive agriculture</p> <p>S3: Improving living standards in rural areas,</p> <p>S4: The differences between rural and urban areas in terms of urban income are reduced</p> <p>S5: Positive attitude towards small entrepreneurs</p>	<p>O1: Promoting innovative techniques at farm level, obtaining new products and processes,</p> <p>O2: Increasing the degree of innovation in the agricultural sector</p> <p>O3: Increasing economic performance and incomes at farm level by optimizing farm production and introducing specific circular economy elements, by using precision agriculture and modern, environmentally friendly technological sequences</p> <p>O4: Development of the middle segment of agriculture in Romania by supporting incomes and investments at the level of agricultural holdings</p>
	WEAKNESSES	THREATS
	<p>W1: Population ageing</p> <p>W2: Reducing employment opportunities in agriculture</p> <p>W3: Depopulation of villages</p> <p>W4: Internal rural labour mobility</p> <p>W5: The degree of technical equipment decreases in proportion to the decrease in the size of the exploitation</p> <p>W6: High income volatility (caused by drought, floods, diseases).</p> <p>W7: High rates of unemployment among young people</p>	<p>T1: Abandonment of agricultural activity due to low incomes and their large variations</p> <p>T2: Price fluctuations for agricultural products and exposure of farmers to market risks</p> <p>T3: Increase in energy prices and inputs;</p> <p>T4: Increase the number of extreme climatic events and the intensity of these.</p>

Farm management	STRENGTHS	OPPORTUNITIES
	<p>S1: High share of rural areas S2: Rich rural heritage S3: Improving living standards in rural areas, S4: Ensuring financing from European funds</p>	<p>O1: CAP 2021 – 2027 more flexible for EU-28 diversity providing an appropriate framework to continue restructuring and investment O2: Possibility to use European Structural and Investment Funds for a national cadastre system O3: Marketing facilities for producer groups and producer associations O4: Diversification of the rural economy creates jobs outside the agricultural sector O5: Creating jobs in rural areas by penetrating foreign-owned enterprises (producers, services, etc.) O6: The average salary in rural areas increases due to economic growth O7: Possibility to use remittances for investments O8: Intensification of agro-tourism O9: Emergence of small young agricultural entrepreneurs</p>
	WEAKNESSES	THREATS
	<p>W1: High share of farms without legal personality W2: Lack of a functional cadastre system with high costs for land registration W3: Large number of farmers who are not eligible for technical assistance</p>	<p>T1: Migration of young and skilled population from rural areas to urban areas and other countries T2: Risk of depopulation of rural areas T3: Outdated skills and knowledge of agricultural administration staff</p>

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	W4: High share of subsistence and semi-subsistence farms W5: Slow transfer of land to young people and new entrants W6: Insufficient public consultancy services W7: Small number of producer organisations	
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Production methods	STRENGTHS	OPPORTUNITIES
	S1: Satisfactory water resources S2: Relatively high share of forests in OR S3: Wide range of renewable energy sources S4: Diverse natural environment	O1: Increasing modern agricultural land management practices through research/innovation and extension O2: Mass penetration of modern management practices through research and extension O3: Development and/or use of climate-resilient species O4: Increasing renewable energy resources in agriculture O5: Sustainable resource management
	WEAKNESSES	THREATS
	W1: Poor quality physical infrastructure in rural areas W2: Weak local production and development initiatives W3: Low average income (poverty) W4: Poor quality general and basic rural infrastructure (roads, drinking water supply services, centralization and wastewater treatment/waste treatment, broadband, energy and gas networks)	T1: Accelerated climate change and frequent occurrence of natural disasters and adverse weather conditions T2: Inadequate management of natural disasters T3: Natural disasters and increased soil erosion following deforestation T4: Reduction of water supply due to climate change T5: Temperature increase and change in precipitation patterns

		<p>T6: Mismanagement of agricultural production practices, resulting in an increase in pollution levels</p> <p>T7: Decreased biodiversity</p>
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	STRENGTHS	OPPORTUNITIES
Production valorization	<p>S1: Diversified agricultural production, both in the vegetal and livestock sectors</p> <p>S2: Significant area of agricultural land under agro-environmental commitments promoting extensive agricultural practices, which contribute to the reduction of greenhouse gas emissions and adaptation to the effects of climate change</p> <p>S3: Pilot projects in the development of short supply chains and local markets</p> <p>S4: Large number of mountain products</p>	<p>O1: Significant support for EU investments contributing to the modernisation and restructuring of the agricultural sector, with a view to improving productivity, competitiveness and sustainability, including the circular economy and innovation in agriculture and the food industry</p> <p>O2: EU support for associative forms with an economic role in the beekeeping and fruit vegetables sectors</p> <p>O3: EU support for the establishment/development of collection/storage/and distribution systems, including food markets for Romanian producers</p> <p>O4: Development of administrative partnerships between urban and rural proximity centres in order to dissolve productions/ agricultural products/ food products of first transformation</p> <p>O5: Upward trend in terms of product demand based on short supply chains and marketing on the local market,</p> <p>O6: Growing consumer interest in direct marketing locally, including through the use of on-line platforms for the marketing of agro-food products</p> <p>O7: Increasing trend in the number of products registered in quality and European schemes, especially mountain</p>

	WEAKNESSES	THREATS
	<p>W1: High share of small and very small farms, associated with a significant percentage of households with household/extensive farm systems"</p> <p>W2: Poor adaptation of farms in managing the risks associated with adverse environmental conditions</p> <p>W3: Ageing population at farm managers' level, with a low level of higher specialisation in the agricultural sector</p> <p>W4: Low number of viable and competitive associative forms on the market (producer groups, producer organizations, agricultural cooperatives, etc.)</p> <p>W5: Poor cooperation between farmers and other actors, reflected in a low degree of association with implications for the viability of farms</p>	<p>T1: Increase in energy prices and inputs:</p> <p>T2: Intensification of animal health problems and increase the consumption of medicines in animal husbandry technologies and increase the risks of cross-border diseases, which induce risks from the perspective of population health and food safety</p> <p>T3: Maintaining a low degree of development of the basic infrastructure, with negative effects on investments in the agri-food sector</p>

	STRENGTHS	OPPORTUNITIES
Application of new technologies	<p>S1: Emissions of CH₄ and N₂O in Romania / Ha or among the lowest at EU level</p> <p>S2: Total GHG emissions from agriculture are low compared to EU level</p> <p>S3: In Romania a large share of the total production of ER comes from the agricultural and forestry sectors</p>	<p>O1: - Providing European funds for the application of environmentally friendly practices leading to the reduction of GHG emissions and adaptation to the effects of climate change</p> <p>O2: - Increasing consumer interest in products obtained in organic farming and through other environmentally friendly agricultural practices</p>

	S4: Significant area in or of permanent grassland, with an important contribution to soil carbon storage	O3: - Use of precision agriculture and other new technologies leading to the conservation of productive potential in the context of mitigation and adaptation needs to climate change (water retention in soil, reduction of soil degradation process, reduction of soil fertility loss phenomena, reduction of unfavorable impact of global climate change, etc.)
	<p style="text-align: center;">WEAKNESSES</p> <p>W1: The use of conventional, intensive agricultural practices over large areas and small ecologically cultivated area</p> <p>W2: The number of animals of local breeds in danger of abandonment, adapted to local conditions and contributing to genetic diversity is decreasing due to their low productivity</p> <p>W3: Insufficient knowledge of farmers in the production and use of renewable energy and the use of methods and technologies that contribute to their genetic diversity is generally decreasing due to their low productivity</p> <p>W4: Insufficient knowledge of farmers in the production and use of renewable energy and the use of methods and technologies that contribute to e to adapt to climate change and reduce GHG emissions</p>	<p style="text-align: center;">THREATS</p> <p>T1: - Increase in the number of extreme climatic events and their intensity</p> <p>T2: - Decrease in areas cultivated according to organic agricultural practices and increase in the negative impact on the environment of agricultural activities as a result of intensive farming practice (especially on the most productive agricultural land)</p> <p>Q3: - Failure to adapt the capacity of training and consultancy services, from a quantitative and qualitative point of view, to the needs of farmers</p>

Regulatory framework in force in each country	STRENGTHS	OPPORTUNITIES
	S1: Existence of the specific legislative framework for the mountain area S2: Optional mention of quality Mountain product in accordance with the legislation in force	O1: The new National Strategic Plan 2021/2023- 2027
	WEAKNESSES	THREATS
	W1: Lack of a comprehensive and unified legislative framework for regulating the short supply chain W2: Lack of knowledge of legislation on the protection of the rural environment	T1: The increased pace of depopulation and abandonment of agricultural activities by farmers in the mountain area T2: The lack of interests of politicians and those in the administration pu blica agricola

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1.2.6. Spain

	STRENGTHS	OPPORTUNITIES
How to join the sector	<p>S1: Neo-rural people willing to start a business in rural areas.</p> <p>S2: Extensive livestock farming contributes to mitigate the depopulation of rural areas.</p> <p>S3: Among the transhumance farmers there is a young group, committed and willing to bet on the sector.</p> <p>S4: The larger the farm, the higher the level of qualification.</p>	<p>O1: The implementation of qualification strategies can improve the social perception of the sector.</p> <p>O2: The number of people with university degrees is increasing significantly.</p> <p>Increasing support from the European Union for family farming production models, young farmers, small farmers and mountain farming.</p> <p>O3: The immigrant population may be more interested than the local population in becoming shepherds.</p> <p>O4: The circumstances of the pandemic crisis may lead to a return of certain people to work in the rural environment and in the agriculture and livestock sectors.</p> <p>O5: The integration of women in the transhumant livestock farming sector may lead to greater social recognition and a greater attraction to work in the sector.</p> <p>O6: Aid for the installation of young farmers and the modernization of farms.</p> <p>O7: Appearance of corporate formulas in response to the difficulties in financing investments in the incorporation processes (Agricultural Transformation</p> <p>O8: Companies Cooperative and Limited Liability Company).</p>

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		<p>O9: There are large areas of underutilized pastures covered with scrub.</p> <p>O10: Pastures represent more than 50% of the land surface in many municipalities.</p> <p>O11: As an economic resource, they can only be used by extensive livestock farming.</p> <p>O12: There are plans to make payments for environmental services or land contracts that could be useful to support extensive livestock farming.</p>
	WEAKNESSES	THREATS
	<p>W1: The vast majority of livestock farm managers have exclusively practical experience; very few have formal training.</p> <p>W2: Tasks that will become increasingly mechanized and complex, requiring higher qualifications.</p> <p>W3: There is a lack of adequate training centers for herders and/or livestock farmers.</p> <p>W4: There are fewer and fewer young people in the Spanish agricultural sector, but with larger farms.</p> <p>W5: There is little infrastructure in the mountain ports or it is in poor conditions.</p> <p>W6: High dependence on subsidies to achieve economic viability of farms.</p>	<p>T1: Access to land, financing and knowledge are significant barriers that prevent young people from taking up farming or ranching.</p> <p>T2: Access in rural areas to infrastructure and basic services equivalent to those enjoyed by young people who do not live in rural areas, such as broadband, childcare, schools, transportation, and postal, health and replacement services.</p> <p>T3: Depopulation and aging of the population continue to be very serious problems in rural areas.</p> <p>T4: The need to make a large investment to start a farm.</p> <p>T5: There is a problem of a lack of generational replacement among livestock breeders and shepherds. In particular, it is difficult to find new shepherds who know the transhumant trade or have an interest in learning it.</p>

<p>W7: Young farmers hardly receive any CAP subsidies: 91% of direct CAP subsidies are received by people over 40 years of age and 38.14% of the total are over 65 years of age.</p> <p>W8: The integration of women in the sector is very scarce and, when it occurs, it is not very visible. There is a great lack of recognition of the role of women in the sector.</p> <p>W9: Women enter livestock farming at an older age than men; in many cases they are over 40 years of age, which is the limit for applying for aid for the incorporation of young people into the Spanish agricultural sector.</p> <p>W10: Depopulation of large rural areas.</p> <p>W11: Processes of masculinization of the rural environment.</p> <p>W12: The reconciliation of work and family life is complicated.</p> <p>W13: There is a general lack of knowledge about the current situation of transhumance in society, sometimes distorted by the superficial information offered by the media about this activity.</p> <p>W14: Lack of associations through cooperatives to maximize marketing and boost sales to increase farm profitability</p>	<p>T6: There are certain conflicts of use in some ports with equine and bovine cattle belonging to neighbors of the towns where the mountain ports are located.</p> <p>T7: The low prices paid for lamb and wool complicate the viability of transhumant livestock farms.</p>
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Farm management	STRENGTHS	OPPORTUNITIES
	<p>S1: Transhumance sheep flocks also include goats, which contributes to the diversification of farms.</p> <p>S2: Among the farmers who practice transhumance to the mountain ports, there are diverse management options and alternatives, different cycles and periods of stay in the ports. This diversity reflects the richness of the activity.</p> <p>S3: Current farm management allows for higher production and lower costs than traditional transhumance management.</p>	<p>O1: Mastery of environmental contents, knowledge of the use of certain substances and their effects on soil, water and human health are key for all agricultural and livestock professionals, not only because of the requirements derived from regulations, but also because of the increase in profitability caused by influencing these aspects.</p>
	WEAKNESSES	THREATS
	<p>W1: Lack of training and technical information adapted to the production system.</p> <p>W2: Livestock waste produced by sheep is not adequately managed.</p> <p>W3: Transhumant livestock farming, by its nature, is strongly dependent on the environmental conditions that occur each year, which can lead to significant variations in farm yields.</p> <p>W4: The decrease in product prices generates the need to have a greater volume of animals per farm to achieve the same profitability, which entails an overexertion in the farmer's daily work.</p> <p>W5: The movement of livestock requires an extra personal and economic effort, in addition to the permanent care required by sheep.</p>	<p>T1: Emerging diseases put the health of the animals at risk and, as a consequence, increase farm management costs.</p> <p>T2: The hardiness and adaptation to the environment of some sheep breeds has decreased in some flocks due to crossbreeding with other breeds such as Landschaft.</p>

Production methods	STRENGTHS	OPPORTUNITIES
	<p>S1: The conversion from conventional to organic production is relatively easy since sheep farming in extensive is very close to the criteria required in organic production.</p> <p>S2: Extensive sheep farming is a system very close to organic farming that requires minor modifications to comply with organic production regulations.</p>	<p>O1: Evolution of consumption habits: increased consumption of quality, natural, healthy organic products and meat from livestock raised under high animal welfare standards, with traceability, with nutritional and functional qualities.</p> <p>Increasing inclusion of the feed sector in the organic industry as a nutritional supplement to organic livestock.</p>
	WEAKNESSES	THREATS
	<p>W1: Little specific training in organic production.</p> <p>W2: Greater documentation requirements if the production is organic for certification and control.</p> <p>W3: A large part of the grazing areas are public forests, whose pastures must be previously certified as organic by the entities that manage them.</p>	<p>T1: Lack of specific training on organic production.</p> <p>T2: Possible contamination of the environment and organic plots due to imperfect applications of phytosanitary treatments in nearby plots.</p> <p>T3: Lack of consumer information on what an organic product really is, how it is produced and its advantages for the environment and health.</p> <p>T4: Confusion between the terms healthy, dietetic and organic, with what they in terms of the characteristics of the products.</p> <p>T5: Predominance of long distribution channels or in the hands of large distribution groups that distance the producer from the consumer by raising the price of the product.</p>

	STRENGTHS	OPPORTUNITIES
Production valorization	<p>S1: The growing recognition by the administration and society as a whole of the importance of conserving transhumant livestock farming.</p> <p>S2: The recent creation of organizations that watch over extensive and transhumant livestock farming at the regional, state and European levels opens the door to generating greater influence on policies related to the sector.</p> <p>S3: The possibility of improving external aid for environmental services rendered in the future could help to make farms more viable.</p> <p>S4: The fact of having a differentiated product (transhumant lamb grazing in the mountain passes) could be a strong point for the future marketing of this meat in a differentiated way through a specific quality seal.</p> <p>S5: The location of ports in protected natural areas can also help to differentiate and position the product in the market.</p> <p>S6: There have already been and there are experiences linked to cooperativism among livestock farmers, which implies a certain knowledge of the implications of this type of marketing solutions.</p> <p>S7: Increased consumption of organic products and conscious consumption of meat from a rational system. The extensive transhumant system is in accordance with the principles of animal welfare.</p>	<p>O1: The transfer to the consumer of the environmental benefits of transhumant livestock farming can generate support for these products and a differentiated market with better prices.</p> <p>O2: There is an increasing demand for quality and organic products by Spanish consumers.</p> <p>O3: The presence of short marketing circuits or consumer groups that are committed to buying directly from the producer is becoming more frequent. This could be an opportunity for quality products such as transhumant merino lamb.</p> <p>O4: There is a network of rural tourism lodgings and hotels in the area that represent a potential market for the sector.</p> <p>O5: The increase in cereal prices affects this sector less negatively than intensive livestock farming, which is a competitive factor.</p> <p>O6: Increase of immigrant population, consumer of sheep meat, example of it is the case of the Moroccan population, in which the sheep is present in its main celebrations of the year.</p> <p>O7: Growth of fast food sales based on sheep meat (Kebab).</p> <p>O8: There are products with market potential to be explored, such as sheep or mutton jerky or sausages made from sheep meat.</p> <p>O9: Proximity to important centers of consumption and a network of roads and highways in good condition would facilitate good marketing and distribution.</p>

	<p>S8: The stay in the mountain ports improves notably and visibly the health of the herds.</p> <p>S9: Transhumant livestock farming includes a lower presence of compound feed and non-natural products in the livestock feed.</p>	
	<p style="text-align: center;">WEAKNESSES</p> <p>W1: The scarce tradition of processing or direct sales in short marketing circuits, which prevents increasing the added value that the livestock activity could generate.</p> <p>W2: At present, there is no differentiation in the transhumant lamb market. The commercialization of this product is undifferentiated from other lambs raised in different circumstances.</p> <p>W3: An important part of the value of the product is left in the hands of the intermediaries, who also do not provide sufficient information to the market about the product and its differentiation.</p> <p>W4: There have been some bad experiences of cooperativism among farmers in the sector, which may hinder future initiatives in this direction.</p> <p>W5: Lamb prices are subject to a strong seasonality, closely linked to certain festivities and times of the year, such as summer or - particularly- the Christmas season.</p> <p>W6: Little training in quality management, traceability, marketing or business communication.</p>	<p style="text-align: center;">THREATS</p> <p>T1: The progressive concentration of sales in a very limited number of large distribution brands, with purchasing policies that in principle do not benefit small producers.</p> <p>T2: Lamb consumption could fall even further if the situation of economic crisis and reduction in household spending persists.</p> <p>T3: The information reaching the public about the harmful effects of livestock farming on the environment in relation to climate change (methane emissions).</p> <p>T4: The spread of new eating patterns with less meat consumption, particularly red meat.</p>

	W7: Scarce offer on marketing models (direct sales, knowledge of the value chain, grouping of productions, etc.), hygienic-sanitary requirements, etc.	
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Application of new technologies	STRENGTHS	OPPORTUNITIES
		O1: There are more and more technological devices for extensive livestock farming based on GIS and remote sensing. O2: Need to record data related to farm management (traceability). O3:..Need to use information technologies for marketing and business management.
	WEAKNESSES	THREATS
	W1: Poor use of equipment based on remote sensing and data collection. W2: Little training in the use and processing of data provided by technological devices and the benefits offered by the information collected to plan production strategies and manage farms. W3: Little use of social networks to promote the livestock activity or the product or to communicate the benefits of livestock activity in society.	T1: Internet access problems in rural areas.

Regulatory framework	STRENGTHS	OPPORTUNITIES
	<p>S1: The existence of organizations that watch over extensive and transhumant livestock farming at the local, regional, state and European levels is a useful instrument for exerting greater influence on policies related to the sector.</p> <p>S2: The possibility of improved external aid for environmental services provided in the future can help to make farms more viable.</p>	<p>O1: The upcoming CAP reform is an important opportunity to reinforce the role that extensive and transhumant livestock farming plays in the territory and to ensure that payments to livestock farmers are more in line with the environmental service they provide.</p>
	WEAKNESSES	THREATS
	<p>W1: Current CAP subsidies are decoupled from real production and the environmental services that extensive and transhumant livestock farming provide to society.</p> <p>W2: There is a lack of coordination between the environmental and agricultural administration that has a negative impact on the sector.</p> <p>W3: Existing initiatives to support and recognize extensive and transhumant livestock farming are not yet sufficiently coordinated.</p> <p>W4: Lack of knowledge of health legislation on the part of some farmers and shepherds.</p>	<p>T1: Different regional regulations greatly complicate livestock movements between different territories.</p> <p>T2: Certain regulations that are at odds with animal health and welfare - such as the obligation to identify animals with intraruminal boluses or vaccination against bluetongue - can be detrimental to livestock.</p> <p>T3: Health legislation does not take into account the particularities of transhumant livestock farming and makes it share regulations, restrictions and controls with intensive livestock farming, a sector with which it has little in common. In particular, the difficulties in the management of carcasses, transport guides and sanitation deadlines.</p> <p>T4: The complex administrative procedures related to livestock health and identification complicate economic activity.</p>

		<p>T5: The absence of a more collaborative character on the part of the technical and administrative personnel in charge of dealing with transhumant livestock farmers.</p> <p>T6: Great media and political pressure from the large intensive production cooperatives, whose interests contrast with those of extensive production.</p>
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	STRENGTHS	OPPORTUNITIES
Others	<p>S1: There is a great livestock tradition in Spain.</p> <p>S2: Transhumance generates social interest and media attention.</p> <p>S3: The traditional network of cattle trails and their use for livestock movements also form a network of ecologically important corridors.</p> <p>S4: Extensive livestock farming contributes to mitigating the depopulation of rural areas.</p> <p>S5: Extensive livestock farming can be one of the alternatives to mining, together with the use of other forest products, rural tourism, etc.</p> <p>S6: Transhumant livestock farming is a way of using the pastures of the mountain passes in a sustainable and environmentally friendly way.</p> <p>S7: This system maintains autochthonous cattle breeds of great hardiness and adaptation to the environment.</p>	<p>O1: Transhumance can be linked to the need for new services and products related to leisure and tourism.</p> <p>O2: Livestock farming is a very useful tool for managing natural areas, improving their biodiversity and preventing forest fires.</p> <p>O3: There is a growing recognition by the administration and different organizations of the importance of transhumance livestock farming as a traditional and beneficial use for the environment.</p>

	<p>S8: There are fairs and other social events organized to support transhumance.</p> <p>S9: There is a great cultural and ethnographic heritage around transhumance that society knows it is necessary to preserve.</p> <p>S10: There is a large amount of documentation, bibliography and work done on transhumance. Transhumance is very well documented.</p> <p>S11: There are very notable and rigorous researchers who have been working on the subject for many years and are an unequalled source of information and knowledge.</p> <p>S12: It is a system that, in addition to maintaining native breeds of sheep, also preserves native breeds of dog that are fully adapted to the needs of transhumance sheep farming, in particular defense against predators -mastiffs- and the movement of flocks -carrows-.</p>	
	WEAKNESSES	THREATS
	<p>W1: The great heterogeneity of livestock landscapes and uses makes it necessary to specialize and refine qualification strategies in the sector.</p> <p>W2: The administrative system for allocating ports is complex and not very agile in terms of its design and procedures.</p>	<p>T1: The progressive increase of cattle and horse herds generates greater competition for the use of mountain passes.</p> <p>T2: The difficulties to develop transhumance livestock activity in a globalized market could end up extinguishing transhumance in mountain passes.</p> <p>T3: The impact of climate change on the dynamics of vegetation in mountain passes could have a negative influence on transhumance livestock activity.</p>

1.2.7. UK

How to join the sector	STRENGTHS	OPPORTUNITIES
	S1: Many shepherds in Scotland, potential for work experience & learning from others.	O1: There are a range of training grants, free advice and mentoring service for new entrants, including the Women in Agriculture Training Fund & Farm Advisory Mentoring Service O2: There are a range of new business and entrepreneur advice hubs offering business and marketing advice.
	WEAKNESSES	THREATS
	W1: Perceived as a poorly paid sector W2: Renting land is difficult as the profit margin is low & long term habitat management (e.g. agroforestry) is difficult without owning the land.	T1: Difficult to promote to young people as a viable, achievable career if not from a farming background already. T2: Difficulties of establishing long term habitat management, breed development, secure sustainable business on rented land, or finding capital to buy land.

Production techniques	STRENGTHS	OPPORTUNITIES
	S1: Growing interest in locally produced, sustainable meat S2: Much of the land in Scotland is not suitable for large scale arable farming, but can support sheep farming & lots of potential for agroforestry combined with shepherding S3: Range of breeds (rare and native) which have different properties & characteristics suitable for different habitats & products.	O1: There are some grants for agroforestry improvement & an information hub in Scotland O2: Conservation grazing does exist and there might be potential for more if linked to well marketed, sustainable products

		O3:Providing more opportunities to process and market wool for textiles and home insulation could make use of abundant material & improve income options for shepherds.
	WEAKNESSES	THREATS
	<p>W1:We have lots of wool, much of it from extensively managed hill sheep but very low wool prices (less than the cost of shearing) and very few places to process the wool, leading to long waits for small producers</p> <p>W2: The costs of keeping sheep (feeding, land, health care costs, mortality) versus sustainable profits make it a uncertain employment.</p>	<p>T1:Low income for Scottish shepherds & post Brexit uncertainty forces shepherds to quit or not to start new sheep enterprises</p> <p>T2:Further reduction of rural abattoir services</p> <p>T3:Wool processing facilities & price/market for wool continues to decrease.</p>

Farm management	STRENGTHS	OPPORTUNITIES
	<p>S1:Sheep keeping & agroforestry have potential in large areas of marginal agricultural land in Scotland</p> <p>S2:Range of different sheep keeping models (lowland, upland, small, medium & large enterprises, full time & part-time models</p> <p>S3: Good sheep dog allows for management of larger</p> <p>S4: good advice & breed information for rare & native breeds.</p>	<p>O1:Training & some grants available for agroforestry, conservation grazing techniques,</p> <p>O2:Sheep dog training including virtual training allows shepherds to train own dog, rather than high cost of purchase</p> <p>O3:New farm support system post Brexit could include incentives for more sustainable farm management.</p>
	WEAKNESSES	THREATS
	<p>W1: Overgrazing and low prices for products are negative for the environment and for shepherd livelihoods.</p>	<p>T1:Uncertain farm support systems post Brexit</p>

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	<p>W2: Costs of animal welfare, veterinary services are high in relation to potential income</p> <p>W3: Wool shearing is a cost, necessary for animal welfare but no income.</p>	<p>T2: Long term planning & investment needed to implement sustainable management techniques without a guaranteed income</p> <p>T3: Loss of more rare and native breeds.</p>
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Production methods	STRENGTHS	OPPORTUNITIES
	<p>S1: Growing number of well marketed, sustainably produced meat acts as a model for others</p> <p>S2: Sheep milk/cheese, a small niche market but strong national organisation offering training & advice</p> <p>S3: Business & marketing support for (specialist & non-specialist available).</p>	<p>O1: Training funds available & a number of professional organisations to share best practice on production methods</p> <p>O2: Locally sourced wool could become a more valued product for textiles, craft & house insulation.</p>
	WEAKNESSES	THREATS
	<p>W1: Fewer abattoirs and need to transport long distances in rural areas (decreases animal welfare & increases costs to small & medium producers)</p> <p>W2: Lack of wool processing facilities, long waits for small producers.</p>	<p>T1: Lack of knowledge or confidence in marketing products leads to lower profits and fewer or poorer shepherds & less benefits for everyone</p> <p>T2: Wool is destroyed as uneconomical and sustainable, local material is lost.</p>

Production valorization	STRENGTHS	OPPORTUNITIES
	<p>S1: Several certifying brands are available & recognised by the public including, Organic, but also biodynamic & pasture fed, big barn etc.</p>	<p>O1: Greater demand for locally sourced & sustainable food from a range of outlets and online platforms.</p>

	WEAKNESSES	THREATS
	W1: Expensive to certify products in a poorly paid sector & for smaller producers.	T1: Lack of uptake by producers makes it difficult for certifying organisations to continue or increase their activities T2: Fewer outlets (physical or virtual) for sustainable products & lower salaries to buy higher quality products after COVID10.

Application of new technologies	STRENGTHS	OPPORTUNITIES
	S1: Direct selling & marketing opportunities S2: Sheep record keeping online S3: virtual & online training easier for rural & remote areas.	O1: affordable training & professional development for rural isolated area O2: Direct engagement with customers O3: direct engagement with other shepherds O4: flock management & habitat/farm management tools.
	WEAKNESSES	THREATS
	W1: Access to good internet connections W2: Engagement interest & training for shepherds of different backgrounds, interests and ages.	T1: Costs & necessary training for smaller enterprises.

Regulatory framework in force in each country	STRENGTHS	OPPORTUNITIES
	<p>S1: Strong interest for providing training opportunities for young people</p> <p>S2: Commitment of Scottish government to be carbon net zero by 2045</p> <p>S3: Biodiversity targets (Aichi) including agricultural land & management.</p>	<p>O1: Funding for training young people & supporting women in agriculture</p> <p>O2: Net zero Scotland and reduced carbon farming techniques, high in political agenda (including COP 26) & in public consciousness</p> <p>O3: agroforestry funding streams.</p>
	WEAKNESSES	THREATS
	<p>W1: Uncertain systems post Brexit.</p>	<p>T1: Lack of political will to implement carbon reduction measures</p> <p>T2: Lack of support for sustainable farming in post-Brexit systems</p> <p>T3: Agroforestry is carried out poorly & does not include integrated livestock systems.</p>

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1.3. Detected needs

As a result of the diagnostic process of extensive livestock farming in the partner countries, a series of needs are identified from which strategic lines of action will be established in order to achieve quality training for potential shepherds.

1.3.1. Austria

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques			
Animal nutrition	Animal welfare and productivity	Pasture management Concentrate feeding	LFI offers, part in the certificate course sheep and goat (80 hours)
Claw health	Most farmers are doing claw trimming by themselves.	Claw trimming	LFI offers, part in the certificate course sheep and goat (80 hours)
Training needs derived from the management of extensive livestock farms			
Herd-protection	Increasing predators	Fencing systems, shepherds, protection-dogs	Offers in planning, planned start in autumn 2021
Adaption to climate change	Changes in plant use (higher temperatures, longer vegetation period), animal disease management because of higher temperatures (e.g. ticks and worms)	Grassland management Animal health Housing systems – emissions, heat stress	Different one day seminars in general, But missing: climate change topic
Herd management and housing-systems	Animal welfare	Housing systems	LFI offers, part in the certificate course sheep and goat (80 hours)
Training needs derived from the valorization of production			
Basics of marketing	Many farmers produce highest quality, necessary to get a good price, basic for economic success	Existing brands Basics of self-marketing Pricing	Webinar, certificate course
Basic of product valorization	To get added value	Milk processing Meat processing Wool processing	LFI offers, part in the certificate course sheep and goat (80 hours)

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs derived from the application of new technologies			
GPS tracking	Animal protection, herd management in grazing team: loss of sheep, absence of shepherds	Handling of GPS tracking	Regular seminars at AREC
Training needs derived from the regulatory framework			
current regulatory framework	To be on the actual status	animal protection law animal transportation food safety	LFI offers, part in the certificate course sheep and goat (80 hours)
Possibilities for subsidies	To apply for funding	Funding programmes	LFI

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1.3.2. Bulgaria

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques			
Meat.	Low purchase prices of the lambs. Problems of access to abattoirs in rural areas.	Relationship with butchers and selling meat directly. Training in short marketing channels.	
Wool.	The price of the fleece does not cover the shearing costs, but needs to be done for animal welfare. A sustainable local product is underutilised.	Breed selection for wool, management and shearing techniques for best wool products, developing markets (how to access wool processing).	
Habitat management.	Mountain pastures in Bulgaria are rich in species diversity habitats and are a good prerequisite for their use as grazing.	Conservation grazing training. Grazing for the prevention of forest fires.	
Training needs derived from the management of extensive livestock farms			
Pasture and fodder management.	Balancing sheep nutrition with biodiversity, healthy ecosystems and climate change measures.	Grazing and feeding regimes to reduce reliance on veterinary drugs.	
Animal health and welfare.	Keeping healthy sheep with the minimum of veterinary products in a range of habitat is essential to the role. Managing sheep health, lamb mortality effectively reduces vet and	Efficient sanitary management of livestock. Health promotion (maintenance and improvement of health) and prevention (control and eradication of diseases).	

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	veterinary product costs and allows for a more sustainable business model.	<p>Sheep health and welfare; lambing, grazing and fodder regimes to reduce reliance on veterinary products, non-surgical procedures, animal management techniques.</p> <p>New emerging diseases.</p> <p>Keeping healthy sheep with the minimum of veterinary products.</p> <p>Possible alternative, non-conventional veterinary treatments.</p>	
Coexistencelivestock-largecarnivores.	<p>The gray wolf (<i>Canis lupus</i>) and the brown bear (<i>Ursus arctos</i>) are protected species for Bulgaria. The protection of large carnivores such as the wolf is increasingly high, and the aid from the administration for the farmers is not enough.</p> <p>The livestock guardian dogs are an traditional and effective way to protect sheep flocks and to make it more economic to keep sheep. Knowledge of the different breeds of livestock guardian dogs, their specific characteristics, would be useful for their use in different areas.</p>	<p>Livestock guardian dogs breeds.</p> <p>Learn about the different protection methods and experiences in other areas where large carnivores coexist.</p> <p>How to develop ecotourism projects around the large carnivores.</p>	

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Breedselection.	Breed selection for specific habitats, specific products (meat, milk, wool, grazing habit) or to conserve the genetic stock of rare breeds is a fundamental choice for all shepherds.	Making informed choices about breed selection and management of specific breeds. Maintaining breed records.	

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1.3.3. Germany

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques			
meat	price is not in relation to the effort	appreciation must increase	direct marketing seminars
wool	price is too low shearing wage too high	product range must be changed	
managment	knowledge for micro production	seminars for small size husbandry	
Training needs derived from the management of extensive livestock farms			
animal welfare in small units	compensation for small units at cost	new insights into possibilities	searching for solutions
breeding	special breeds for special regions	testing breeds for landscape types	scientific consideration makes sense
Training needs derived from the valorization of production			
association interests	linking different organizations	expanding cooperations	cooperation with science
finding ecological niches	the demand for organically produced products is increasing	matching producers and consumers in their desires and needs	formulate common goals

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	increasing interest and trend		
Training needs derived from the application of new technologies			
using new ways in learning systems	renew and use learning methods	use new opportunities	Implement ideas from the past months
simplify the training methods	learning from each other with each other	use of the media	ideas wanted
Training needs derived from the regulatory framework			
adapting prescriptive opportunities in the niche	find unconventional forms	modular seminars	
Adapting funding opportunities	simplify implementations	simple application training	ideas wanted
Other training needs derived from the surveys carried out			

1.3.4. Portugal

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques			
Meat.	Value the meat from sheep and goats, through new products that are in the line with integrated agriculture, production of food of recognized quality, through methods that respect public health and the environment.	How to produce new products from sheep and goat meat (ham, sausages, etc)	Some European funded projects developed a specific training.
Wool.	The price of the fleece does not cover the shearing costs, but needs to be done for animal welfare. A sustainable local product is under utilised.	Breed selection for wool, management and shearing techniques for best wool products, developing markets (how to access wool processing).	Not detected. No explicit training course on this subject
Tourism.	Develop touristic opportunities related to shepherds.	How can shepherds diversify their income and benefit from touristic opportunities.	In the School of Shepherds in Alvão there is a class about this.
Training needs derived from the management of extensive livestock farms			
Pasture management.	Balancing sheep nutrition with biodiversity, healthy ecosystems and climate change measures.	Grazing and feeding regimes to reduce reliance on veterinary drugs.	Not detected. No explicit training course on this subject.
Animal health and welfare.	Keeping healthy sheep with the minimum of veterinary products in a range of habitat is essential to the role. Managing sheep health, lamb	Efficient sanitary management of livestock. Health promotion (maintenance and improvement of health) and prevention	An informal course on animal health and conventional treatments organized by

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	mortality effectively reduces vet and veterinary product costs and allows for a more sustainable business model.	(control and eradication of diseases). Sheep health and welfare; lambing, grazing and fodder regimes to reduce reliance on veterinary products, non-surgical procedures, animal management techniques. New emerging diseases. Keeping healthy sheep with the minimum of veterinary products. Possible alternative, non-conventional veterinary treatments.	veterinary universities and agricultural unions has been detected.
Fire control.	Shepherds are accused of starting fires in Portugal. Instead, they should be seen as an environmental provider of fire prevention.	Forest and pasture management in order to prevent wildfires. Use of fire as a tool to support shepherds.	Not detected specified for shepherds.

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Coexistence livestock- large carnivores (iberian wolf).	The Iberian wolf is legally protected but the aid from the administration for wolf's attacks to the livestock is not enough. Sheep dogs are an effective way to manage and protect sheep flocks and to make it more economic to keep sheep. Trained sheep dogs can be very	Sheep dog training. Learn about the different protection methods and experiences in other areas where large carnivores coexist.	Not detected specified for shepherds.

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	expensive to buy but training your own dog is a more affordable option.		
Local Breeds	Local breeds should be promoted and studied, so that a new person could be able to start their business with local breeds.	Making informed choices about local breeds.	Not detected.
Training needs derived from the valorization of production			
Business planning and marketing.	Training and advice on entrepreneurship, particularly in relation to marketing and internationalization of products to develop better incomes based on high quality products well.	Building sustainable and viable business models for different sizes of flock. Agri-food processing and marketing. Self-marketing. Quality marks and seals. Short marketing channels.	In the School of Shepherds in Alvão there is a class about this.
Association and cooperativism	Cooperativism to have a common veterinary assistance and to be more competitive, more easily access state and regional resources and programs, and have a better organization to market products.	Formation and management of cooperatives. Legal relations between cooperative members and the cooperative. Study of practical cases of livestock cooperatives.	Not detected. No explicit training course on this subject.
Certified production.	There is an increasing demand for quality and certified products in Portugal, specially Denomination of Origin (cheese) or Geographical Protected Indication.	Economic investment in certification and control.	Not detected.
Training needs derived from the application of new technologies			

TOPIC	JUSTIFICATION		KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Online presence.	Promote the shepherds work online.	Shepherds are very hard to find online, and their business profile is not present on the Internet through a website, social networks, etc.	Ways to create an online presence.	In the School of Shepherds in Alvão there is a class about this.
Online marketing of products.	Potential for direct marketing of products or accessing online selling platforms for products to increase financial sustainability of shepherd enterprises.	Making shepherd enterprises more financially viable.	Electronic commerce of products. Techniques and case studies for setting up direct, online selling platforms. Engaging with 3rd party online selling platforms Social media techniques to promote your enterprise.	Non-sheep specific training in online marketing and social media training through rural enterprise networks.
GIS and remote sensing.	Greater knowledge of the behavior of pastures, resources and livestock, is a competitive advantage for the sector.	There is a need for resource optimization natural grazing through the use of new technologies. The GIS tools will combine both the monitoring of pastures with satellite remote sensing and the	Technological devices for extensive livestock farming based on GIS and remote sensing. Use of equipment based on remote sensing and data collection. Training in the use and processing of data provided by technological devices and the benefits offered by the information	Some research groups are implementing these GIS tools among farmers, but there is no specific training for this topic.

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	Global Positioning of livestock in real-time.	collected to plan production strategies and manage farms. Analysis and selection of the best available devices for livestock monitoring.	
Training needs derived from the regulatory framework			
Bureaucracy and legal requirements.	Sheep identification numbers, transport paperwork, food hygiene requirements, sheep breed records, sanitary controls of the regional administration, food safety, etc.	Simple methods including online but work in rural areas with poor internet connections.	Some informal course organized by the regional administration and union organizations have been detected.
Applying for grants or subsidies.	Identifying and maximising potential support for sustainable shepherding activities, land management and training from grants.	Clear information on what is available, how to apply for it and how to report on activities.	Different organizations offer advice on potential grants but clear online advice in a single place would be useful.
Recognition of the profession training.	Official recognition of the "Shepherd" as a profession and training by the Ministry of Education.	Recognize the non-formal training for shepherds as a pre-requisite for the governmental program/subsidies to enter the labor market.	

1.3.5. Romania

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques			
Meat/milk	<ul style="list-style-type: none"> • Fluctuating prices for the purchase of lambs. Today we have 12-14 lei / kg / live, last year 5-8 lei / kg / live. • Lack of slaughterhouses for small animals (sheep, goats). • Lack of organization of sheep/goat breeders 	<ul style="list-style-type: none"> • Relationship with retail and direct sale of meat. • Professional training for short marketing / valorization channels that also processed products 	<ul style="list-style-type: none"> • Rural Entrepreneurship Courses and Qualification Courses for the occupations of Mountain shepherd, Mountain Sheep Breeder, Mountain sheep keeper - and Mountain sheepman - organized only by AGROM-RO. • Informing and popularizing among farmers sheep and goat breeders the measures to prevent the Small Ruminant Fish, organized by the County Agricultural Directorates in the mountain area. • Creation of Local Gastronomic Points, family-type touristic food points that offer specific food to the geographical area to which they belong
Wool	<ul style="list-style-type: none"> • The price of wool does not cover the costs of trimming (sheep farmers benefited from de minimis aid for the capitalized wool of 2 lei / kg 	<ul style="list-style-type: none"> • Supporting the capitalization of the wool by granting subsidies and creating centers for collecting, baling, washing 	<ul style="list-style-type: none"> • Before 2007 AGROM-RO organized courses for women where there was also a workshop for felt processing,

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	<p>until 2019, according to the GD no. 500/2017 on the approval of the scheme "The minimis aid for the implementation of the support program for sheep farmers for the commercialization of wool").</p> <ul style="list-style-type: none"> • Large quantities of wool and skins, obtained annually by farmers in the mountain area and insufficiently collected and valued in finished products with added value, quality, useful, healthy and advantageous. A sustainable local product is thrown away. • Realization in Bistrita Nasaud County of the Center for Research, Innovation, Design and Professional Training "Silvania" in Lunca Ilvei, the first building in Romania made of wood and isolated with sheep's wool, which will soon operate in addition to the modern sawmill "Silvania International", for the benefit of pupils and students who will perform here hours of practice in production, research and study, a center that aims to promote innovative methods, solutions and practices for environmental protection, use and balanced capitalization of resources, with the renunciation of aggressive practices on the part of the human factor towards resources and the environment. 	<p>and processing the wool at regional level.</p> <ul style="list-style-type: none"> • Support initiatives to revive the collection, processing and recovery of wool, taking into account that to date this valuable resource has not been used to its full potential. • Creation of new efficient and competitive production capacities, products with the highest added value, optimal use of existing resources, increased productivity of work, implementation of community standards. 	<p>but now there is no longer this offer for lack of interest in this activity.</p>

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Habitat management	<ul style="list-style-type: none"> Mountain meadows are rich in habitats of species diversity and are a good prerequisite for their use as grazing. 	<ul style="list-style-type: none"> Training on rational grazing. Grazing for the prevention of forest fires. Professional training, regarding commitments on Measure 10 – Agro-environment and climate, within the National Rural Development Program (NRDP 2014-2020). 	<ul style="list-style-type: none"> Professional training courses, addressed to beneficiaries who hold commitments on Measure 10 – Agro-environment and climate, within the National Rural Development Program (NRDP 2014-2020) organized by public and private operators. Elaboration of pastoral arrangements on the meadows of territorial administrative units.
Training needs derived from the management of extensive livestock farms			
Management of meadows and obtaining feed	<ul style="list-style-type: none"> Balancing sheep nutrition with biodiversity, healthy ecosystems and climate change measures. In the case of natural grasslands, their characteristics have remained unchanged over time or have undergone small changes under the influence of environmental factors. The change of the use of some lands occupied by meadows in favor of some arable crops (cereals) was achieved due to their favorability in terms of fertility. Large areas of meadows have been grubbed up (plowed), so that today, most of the existing natural meadows occupy land unsuitable for agricultural crops. Some of the meadows have 	<ul style="list-style-type: none"> Grazing and feeding regimens to reduce dependence on veterinary drugs. Permanent grasslands may suffer in time the degradation of the vegetal carpet. The result of this degradation results in the short, medium or long term with significant damage. Depending on the state of degradation of the meadow, the financial possibilities of the owners and the local orographic and stationary conditions (precipitation, temperature, etc.), the grassy carpet can be restored. 	<ul style="list-style-type: none"> It did not exist for small livestock breeders. It organizes the Universities of Agricultural Sciences and Veterinary Medicine only for students at university courses.

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	<p>even become sites of Community interest under the Natura 2000 programme and are part of protected areas.</p> <ul style="list-style-type: none"> • In Romania, natural grasslands are represented by the steppe meadows in the south of the country, respectively by the alpine meadows. Their estimated area is about. 200 000 ha. • Farmers frequently practice starting grazing too early! • Natura 2000 farmland can be eligible for CAP payments under both Pillar I and Pillar II. Eligibility problems had to do with the presence of trees, shrubs and scrubs on pastures, the size of the holding or plot, the land regime, outdated cadastres and difficulties with GAEC standards designated by Member States for more intensive agricultural systems 	<ul style="list-style-type: none"> • Establishment, maintenance and use of sown grasslands 	
Animal health and welfare	<ul style="list-style-type: none"> • Keeping healthy sheep with the minimum of veterinary products in a range of habitats is essential for the role. Sheep health management, lamb mortality effectively reduces the costs of veterinary and veterinary products and allows for a more sustainable business model. 	<ul style="list-style-type: none"> • Effective sanitary management of animals. • Health promotion (maintaining and improving health) and prevention (disease control and eradication). Health and well-being of sheep; regimens for lamb, grazing and feed to reduce dependence on veterinary products, non- 	Not detected. No explicit training course on this subject.

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
		surgical procedures, animal management techniques. New emerging diseases. Keeping healthy sheep with the minimum of veterinary products. Possible alternative, unconventional veterinary treatments.	
Coexistence of animals with large carnivores	<ul style="list-style-type: none"> • In Romania, the last three decades have brought rapid changes in all habitat types, including forest ones, but no extensive studies have been carried out on their impact on wildlife in general and on large carnivores in particular. Accelerated socio-economic development unselectively threatens natural habitats, and the danger of habitat loss represents a new negative perspective for the long-term conservation of species. • The last official report of Romania to the European Commission, in 2019, indicates 6,450–7,200 bears, 2,500–3,000 wolves, 2,100–2,400 lynxes, with the mention that the figures presented are sums of the populations of the Alpine and Continental bioregions and parts of the large carnivore populations are present in both bioregions. 	<ul style="list-style-type: none"> • To learn more about the different methods and experiences of protection in other areas where large carnivores coexist. • How can they develop ecotourism projects around large carnivores • The lack of tolerance poses a threat to both large and small populations. Poaching is a major problem, and in some cases it has been shown to affect increases previously recorded in some populations. The practiced poaching directly affects the fauna populations by eliminating the specimens from the field non-selectively and by reducing the herds of predatory species for carnivores. • A strategic model to promote coexistence that must clearly establish the cause of conflicts and reach an effective solution, 	Courses on improving knowledge about species (populations, distribution, ecology and behavior) through verifiable and transparent methods represent an objective to be assumed by all factors interested in species management does not exist!

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
		without fuelling political debates by promoting strictly reactive solutions	
Training needs derived from the valorization of production			
Business planning and marketing	<ul style="list-style-type: none"> • Training and advice on entrepreneurship, especially in relation to marketing and internationalization of products to develop better revenues based on high-quality products well. 	<ul style="list-style-type: none"> • Building sustainable and viable business models for different herd sizes. • Processing and marketing of agri-food products. • Self-marketing. • Quality marks and seals. • Short marketing channels. 	<ul style="list-style-type: none"> • There are a lot of opportunities but not for specific sheep training in online marketing, but there is no training action that focuses on extensive animals
Association and cooperation	<ul style="list-style-type: none"> • Poor association of livestock breeders. • The opportunity to have joint veterinary assistance and to be more competitive, to access state and European resources and programmes more easily and to have an economic organisation to market products. 	<ul style="list-style-type: none"> • Formation and management of cooperatives. • Legal relations between the cooperative members and the cooperative. • Study of practical cases of livestock cooperatives. 	<ul style="list-style-type: none"> • No explicit training course on the subject. • The AGRICOOP project, financed by EAFRD through National Rural Development Plan 2014-2020, which consisted in promoting advisory services among agricultural producers in order to facilitate their association in agricultural cooperative societies or producer groups according to the national legislation in force, drawing up business plans for their development and concentrating the production of members in order to create new opportunities for economic

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
			development by attracting local advantages, zonal or regional and the use of collective power to increase the prosperity of their members, their families and their communities
Mountain and ecological product	<ul style="list-style-type: none"> • The quality scheme PRODUCED IN THE MOUNTAINS was created at European level to send a strong message to buyers about the added value of food products obtained in the difficult conditions of the mountainous areas. • The optional quality term 'mountain product' is recognised throughout the European Union and helps manufacturers to better promote their products in a very dynamic European market. • Mountain products are promoted in the digital environment by the National Agency of the Mountain Area and by other public institutions. 	<ul style="list-style-type: none"> • A mountain product or an environmentally friendly product will be regarded by buyers as a high-quality product with a certified origin, obtained from an area with a low degree of pollution. • Preserving the authenticity of agricultural products intended for human consumption and to bring added value to products. • The label "mountain product" certifies the mountain origin of the raw materials, the product and the processing area to protect the local gastronomic heritage of the mountain areas and in order to be able to access non-reimbursable funds for the promotion and marketing of agricultural products. 	<ul style="list-style-type: none"> • The MOUNTAIN PRODUCT certification is carried out by the National Agency of the Mountain Area through the staff of the Mountain Development Offices. • Informal and certified courses are organized by ecological certification control entities, private and public trainers.

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs derived from the application of new technologies			
Online training	Knowledge transfer to and from remote rural areas.	Use online tools to access training and also provide training to others as part of the business model.	Not detected
Training needs derived from the regulatory framework			
Legal requirements	<ul style="list-style-type: none"> • Sheep identification numbers, transport documents, food hygiene requirements, records of sheep breeds, health checks of the regional administration, food safety, etc. • Facilitating access to finance for investments in the mountain area for producers and livestock breeders in the mountain area • Balanced population density in the mountainous zone; • Creation and preservation of jobs; • Creating and protecting the access infrastructure; • Developing policies and regulations to encourage activities specific to the mountain area, with incidence on the 27 counties. 	<ul style="list-style-type: none"> • Simple methods, including online, that work in rural areas with poor internet connections. • Implementation of the Program for encouraging activities in the mountain area 	<ul style="list-style-type: none"> • No trainings are organized. The program for the mountain area does not apply.

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1.3.6. Spain

TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques				
Meat.		Problems of access to abattoirs in rural areas.	Relationship with butchers and selling meat directly. Training in short marketing channels.	Not detected. No explicit training course on this subject.
Wool.		The price of the fleece does not cover the shearing costs, but needs to be done for animal welfare. A sustainable local product is under utilised.	Breed selection for wool, management and shearing techniques for best wool products, developing markets (how to access wool processing).	Not detected. No explicit training course on this subject
Habitat management.		Mountain pastures make up one of the most threatened environments in Spain, mainly due to the abandonment of their use as a grazing area.	Conservation grazing training. Grazing for the prevention of forest fires.	Not detected. No explicit training course on this subject.
Training needs derived from the management of extensive livestock farms				
Pasture and fodder management.		Balancing sheep nutrition with biodiversity, healthy ecosystems and climate change measures.	Grazing and feeding regimes to reduce reliance on veterinary drugs.	Not detected. No explicit training course on this subject.
Inputs.		Efficient use of inputs.	Saving or efficient management of inputs. Legal regulations.	Some informal course organized by the organic certification control

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
		Inputs allowed in organic production.	entities and veterinary product companies.
Animal health and welfare.	Keeping healthy sheep with the minimum of veterinary products in a range of habitat is essential to the role. Managing sheep health, lamb mortality effectively reduces vet and veterinary product costs and allows for a more sustainable business model.	Efficient sanitary management of livestock. Health promotion (maintenance and improvement of health) and prevention (control and eradication of diseases). Sheep health and welfare; lambing, grazing and fodder regimes to reduce reliance on veterinary products, non-surgical procedures, animal management techniques. New emerging diseases. Keeping healthy sheep with the minimum of veterinary products. Possible alternative, non-conventional veterinary treatments.	An informal course on animal health and conventional treatments organized by veterinary universities and agricultural unions has been detected.
Coexistence livestock- large carnivores.	The protection of large carnivores such as the wolf is increasingly high in Spain and the aid from the administration for the farmers is not enough.	Sheep dog training. Learn about the different protection methods and experiences in other areas where large carnivores coexist. How to develop ecotourism projects around the large carnivores.	There are some conferences organized mainly by environmental organizations.

TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
		Sheep dogs are an effective way to manage and protect sheep flocks and to make it more economic to keep sheep. Trained sheep dogs can be very expensive to buy but training your own dog is a more affordable option.		
Breed selection.		Breed selection for specific habitats, specific products (meat, milk, wool, grazing habit) or to conserve the genetic stock of rare breeds is a fundamental choice for all shepherds.	Making informed choices about breed selection and management of specific breeds. Maintaining breed records.	Sessions and talks organized by the sheep associations for specific breeds have been detected.
Training needs derived from the valorization of production				
Business planning and marketing.		Training and advice on entrepreneurship, particularly in relation to marketing and internationalization of products to develop better incomes based on high quality products well.	Building sustainable and viable business models for different sizes of flock. Agri-food processing and marketing. Self-marketing. Quality marks and seals. Short marketing channels.	There are lots of opportunity for non-sheep specific training in online marketing but there is no training action that focuses on extensive livestock.
Association and cooperativism.		Cooperativism to have a common veterinary assistance and to be more	Formation and management of cooperatives.	Not detected. No explicit training course on this subject.

TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
		competitive, more easily access state and regional resources and programs, and have a better organization to market products.	Legal relations between cooperative members and the cooperative. Study of practical cases of livestock cooperatives.	
Organic production.		There is an increasing demand for quality and organic products by Spanish consumers. The presence of short marketing circuits or consumer groups that are committed to buying directly from the producer is becoming more frequent. This could be an opportunity for quality products such as transhumant lamb.	Documentation requirements in the organic production for certification and control. Inputs allowed in organic production. Possible alternative, non-conventional veterinary treatments. How to certified grazing areas as organic. Possible contamination of the environment and organic plots due to imperfect applications of phytosanitary treatments in nearby plots. Tools for the evaluation at the business level of the capacities and abilities for the commercialization of ecological or artisan products by small-scale producers.	Some informal course organized by the organic certification control entities have been detected.

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TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs derived from the application of new technologies				
Online training.	Knowledge transfer into and out of remote rural areas.	Using online tools to access training and also potentially to provide training for others as part of the business model.	Ways to find relevant advice and training online.	Not detected. No explicit training course on this subject.
Online marketing of products.	Potential for direct marketing of products or accessing online selling platforms for products to increase financial sustainability of shepherd enterprises.	Making shepherd enterprises more financially viable.	Electronic commerce of products. Techniques and case studies for setting up direct, online selling platforms. Engaging with 3rd party online selling platforms. Social media techniques to promote your enterprise.	There are lots of opportunity for non-sheep specific training in online marketing and social media training through rural enterprise networks.
GIS and remote sensing.	Greater knowledge of the behavior of pastures, resources and livestock, is a competitive advantage for the sector.	There is a need for resource optimization natural grazing through the use of new technologies. The GIS tools will combine both the monitoring of pastures with satellite remote sensing and the Global Positioning of livestock in real-time.	Technological devices for extensive livestock farming based on GIS and remote sensing. Use of equipment based on remote sensing and data collection. Training in the use and processing of data provided by technological devices and the benefits offered by	Some research groups are implementing these GIS tools among farmers, but there is no specific training for this topic.

TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
			the information collected to plan production strategies and manage farms. Analysis and selection of the best available devices for livestock monitoring.	
Training needs derived from the regulatory framework				
Legal requirements.		Sheep identification numbers, transport paperwork, food hygiene requirements, sheep breed records, sanitary controls of the regional administration, food safety, etc.	Simple methods including online but work in rural areas with poor internet connections.	Some informal course organized by the regional administration and union organizations have been detected.
Applying for grants or subsidies.		Identifying and maximising potential support for sustainable shepherding activities, land management and training from grants.	Clear information on what is available, how to apply for it and how to report on activities.	Different organisations offer advice on potential grants but clear online advice in a single place would be useful.
Professional figures		Creation of more professional figures with official recognition of the “Shepherd” as a profession by the National Ministry.	Collective labor agreement. (Correct salary, social security, etc.) Recognize the non-formal training for shepherds as a pre-requisite for	

TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
		Improve work conditions especially in the mountain areas (housing, digitalization, comfort, security).	the governmental program/subsidies to enter the labor market.	
Other training needs derived from the surveys carried out				
Women and gender.	Women have a growing role in rural areas. Rural women, with equal opportunities as men, achieve immediate social and economic improvements.	Encouraging and promoting women's protagonism in decision-making in the rural decision-making in rural areas, so that they can achieve the representation that they are equitably entitled to. In the economy, training must be provided so that women adopt a different, more active and visible role, and that they become aware of their importance in agricultural and livestock operations. Through training and information, but through empowerment and self-assumption of her capabilities and their deployment.	Know the results and experiences of rural companies and agricultural industries that they have obtained the distinctive "equality in the Company". Know the existing tax incentives for women owners of farms livestock. Training in prevention of gender-based violence in rural areas. To get to know the associative movement and women's organisations in the field of primary production in order to promote equality or to combat sexist stereotypes, values or attitudes. Healthy upbringing, family education and positive parenting in rural areas.	Informal courses organized by rural women's associations have been detected.

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Entrepreneurship in rural areas.	<p>The depopulation, the aging of the population and the lack of generational renewal seriously affect the Spanish rural environment. Training to establish population in rural areas, generate wealth and create true rural development focused on its inhabitants, limiting depopulation and promoting equal opportunities in the territory and the generational renewal. that exists in the primary sectors of agriculture and livestock.</p>	<p>Resource search: knowing lines of financing and microfinance for the implementation progress and consolidation of business activities.</p> <p>Notions about rural tourism, agrotourism and tourism of experience linked to the economic activities of the territory such as agriculture, the forestry sector, livestock, water, parks and nature.</p> <p>Livestock diversification.</p> <p>Learn about different self-employment initiatives, rural startup, etc.</p>	<p>Informal courses organized by agrarian unions and shuttles of rural enterprises of the state administration have been detected, but there is no training action that focuses on entrepreneurship in extensive livestock.</p>

1.3.7. UK

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Training needs related to production techniques			
Meat	Main marketed product & main income for shepherds - there are some problems with access to abattoirs in rural areas	Different models (selling sheep at market & others do the meat processing) or direct relationship with butchers & selling meat directly - the benefits & costs & best practice of different models	Covered by most formal & informal courses to some degree
Wool	Wool is a major problem for many shepherds. The price of the fleece does not cover the shearing costs, but needs to be done for animal welfare. A sustainable local product is under utilised	Breed selection for wool, management & shearing techniques for best wool products, developing markets (& how to access wool processing)	Techniques for shearing & some wool processing courses
Milk/cheese	A small market currently but could be part of a shepherd income model	Knowledge of potential for sustainable livelihood & sheep dairy techniques	Sheep Dairy Association offer training & advice
Habitat Management & Biodiversity Conservation	Scottish Wildlife Trust employ a conservation shepherd to manage wildlife rich areas. Conservation organisations are major land owners in Scotland & there could be potential for more of this type of shepherding if it fits with a sustainable business model	Management of healthy biodiverse ecosystems which also support sustainable sheep products & livelihoods; could apply to crofters, small holders, conservation landowners, community orchards as well as larger sheep enterprises	CONservation grazing courses by RBST GAP project MOB Grazing & Pasture Fed Forums (Peer to peer farmer support)
Training needs derived from the management of extensive livestock farms			

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Pasture & Fodder Management	Balancing sheep nutrition with biodiversity, healthy ecosystems & climate change measures	Management of grasslands, heath land & agroforestry Regenerative & mob grazing Agroforestry grazing systems Grazing & feeding regimes to reduce reliance on veterinary drugs, wormers etc	Different courses and organisations offer different types of training/advice on this, as well as peer to peer farmer/shepherd knowledge sharing on forums
Animal Health & Welfare & Flock Management	Keeping healthy sheep with the minimum of veterinary products in a range of habitat is essential to the role. Managing sheep health, lamb mortality effectively reduces vet and veterinary product costs and allows for a more sustainable business model. Flock health management techniques	Sheep health & welfare; lambing, grazing & fodder regimes to reduce reliance on veterinary products, non-surgical procedures, animal management techniques	Sheep health & welfare and lambing techniques are covered in most training courses. The area where there is less information and training is on grazing and feeding regimes for sheep health which reduce reliance on veterinary products.
Sheep Dogs	Sheep dogs are an effective way to manage sheep flocks and to make it more economic to keep sheep. Trained sheep dogs can be very expensive to buy but	Sheep dog training (often Border Collie breed)	Sheep dog training is available through a number of providers from short courses to longer training programmes. There is at least one virtual sheep dog

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TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	training your own dog is a more affordable option.		training provider. Sheep dog training courses were very popular in the most recent Women in Agriculture training fund in Scotland
Breed Selection	<p>Breed selection for specific habitats, specific products (meat, milk, wool, grazing habit) or to conserve the genetic stock of rare breeds is a fundamental choice for all shepherds.</p> <p>Flock management as part of overall animal health and animal management</p>	<p>Making informed choices about breed selection and management of specific breeds.</p> <p>Maintaining breed records</p> <p>Cross-breeding different sheep breeds for specific qualities</p>	<p>Sheep Associations for specific breeds (e.g. Black Face Association), Rare Breeds Survival Trust</p>
Adapting to a changing climate	<p>The changing climate will bring new extreme weather events and the movement of insects, sheep pests. Shepherds need to understand techniques for mitigating against extremes of sun, wind, rain etc and how to recognise and deal with new sheep pest control.</p>	<p>Planting & land management for shade, wind protection, flooding and drought.</p> <p>Pest recognition & techniques for coping with new insect pests</p>	<p>No explicit training course on this subject</p>

TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Health & Safety for Shepherds		Shepherds often work alone in remote rural areas, sometimes with bad telephone connections, sometimes using quads, vehicles and lifting heavy feed or equipment	<p>Lone working safety techniques</p> <p>Equipment & vehicle health and safety techniques</p> <p>Personal health and avoidance of work based accidents</p>	These are covered in many courses and there are some specific courses on different elements
Training needs derived from the valorization of production				
Business Planning & Marketing		Shepherding is often a low income profession, there is a need to support and assist shepherds to develop better incomes based on high quality products well	Building sustainable & viable business models for different sizes of flock, full-time & part-time shepherds	Specialist for Sheep (e.g. FAS, SOILAss, Sheep Dairy Asso) & Non-Specialist for sheep (Growbiz, Business Gateway, First Port)
Training needs derived from the application of new technologies				
Online Records	Keeping records easily	Simplifying the time needed to maintain records	Finding simple ways to keep online records in areas with bad internet reception	
Online Training	Knowledge transfer into and out of	Using online tools to access training and also potentially to provide training for others as part of the business model	Ways to find relevant advice & training online	

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TOPIC		JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
	remote rural areas		Potential for setting up own partial or fully online training services	
Online Marketing of Products	Potential for direct marketing of products or accessing online selling platforms for products to increase financial sustainability of shepherd enterprises	Making shepherd enterprises more financially viable	<p>Techniques & case studies for setting up direct, online selling platforms</p> <p>Engaging with 3rd party online selling platforms</p> <p>Social Media techniques to promote your enterprise</p>	There are lots of opportunity for non-sheep specific training in online marketing and social media training through rural enterprise networks and government programmes.
Training needs derived from the regulatory framework				
Sheep Records & Legal Requirements		Sheep Identification Numbers, Transport paperwork, Food Hygiene requirements, Sheep breed records	Simple methods including online but work in rural areas with poor internet connections	Most courses cover the basic legal requirements. Best practice examples and case studies in online record keeping would be useful

TOPIC	JUSTIFICATION	KNOWLEDGE DEMANDED BY TRAINEES	EXISTING TRAINING OFFER
Applying for grants or farm subsidies	Identifying & maximising potential support for sustainable shepherding activities, land management & training from grants	Clear information on what is available, how to apply for it and how to report on activities	Different organisations offer advice on potential grants but clear online advice in a single place would be useful
Calculating carbon emissions & biodiversity audits	Demonstrating/calculating effect of activities on carbon emissions & biodiversity. Simple ways to calculate and show this could be useful for reporting on grants & encouraging governments to support more sustainable shepherding, informing customers about the multiple benefits of buying these products.	How to calculate (simply) carbon and biodiversity effects of activities & demonstrate simply to others	There are some tools for calculating figures on this, (e.g. FAS land management tool) but very simple ways for individual shepherds to calculate benefits and show clearly and easily to others would be good.
Other training needs derived from the surveys carried out			
Training paths/modules for different groups	Making it easier for existing shepherds to access the best information about changing to more sustainable shepherding or for new entrants to see the range of possible business models, breed and product types, and training available.	Information for existing shepherds wanting to change to more sustainable models or develop local product markets Information for new entrants to the profession targeted to different groups (mature new entrants, school leavers, part-time and full-time shepherds)	There are a range of training offers and support networks but they are in a range of places and it can be difficult to find the most relevant information.

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