Importance of mountain silvopastoral areas in the production of autochthonous animal breeds and promotion of beekeeping in Northern Portugal

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1 - Introduction

► Maintaining extensive agro-livestock systems using production methods based on traditional agricultural practices, compatible with the conservation of soil resources, water and biodiversity, is essential for rural development of inland Portugal, which is characterized by mountain areas, with low densities human settlement and susceptible to desertification. In addition to the ecological aspects, the production of goods of excellence, and differentiated, it is the only way of affirmation in global markets.

► The national strategy, in recent years, to promote this model of development comprised the support for production of autochthonous animals breeds and promotion of beekeeping (AGRO programs, AGRIS and PRODER), which are dependent on agrosilvopastoral areas.

► These activities are deeply dependent on land use, where forests have a clear dominance. The synergies created by agro-livestock production result, thus, in a direct economic benefit from cattle production. However, on the other hand, this activity creates mosaics of discontinuity in the dense vegetation contributing to reducing the spread of forest fires, with inherent indirect economic benefits.

2 - Methodology

► This work aims to show the importance of mountain silvopastoral areas in the establishment of projects to produce autochthonous livestock breeds of sheep, beef cattle and goats and beehkeeping, in Northern Portugal.

► The methodology consists in the characterization of the landcover in 13 locations, in the municipalities of Vila Pouca de Aguiar, Murça, Vila Real, Sabrosa, Alijó and Moimenta da Beira, where different investment projects were implemented between 2001 and 2013. For a total of 335 colonies of honeybees, 121 beef cattle, 124 goats, 194 sheeps + goats and 105 sheeps + beef cattle they were contemplated 728.01 hectares, of which 84.9% are silvopastoral areas. The direct investment totalized 826 510.00 €.

3 - Results

► Landover type, primarily silvopastoral areas (shrubland constituted mainly by broom, gorse, furze, etc.) and natural pastures, is markedly associated with the nature of the implemented projects, characterized by reduced and diversified livestock effective.

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Table 1. Mountain silvopastoral areas in the production of autochthonous animal breeds and honeybees

<table>
<thead>
<tr>
<th>Specie</th>
<th>Effective</th>
<th>Area of pasture (ha)</th>
<th>Silvopastoral areas (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>honeybees</td>
<td>335 colmeias</td>
<td>51,25</td>
<td>46,13</td>
</tr>
<tr>
<td>beef cattle</td>
<td>121</td>
<td>298,72</td>
<td>296,24</td>
</tr>
<tr>
<td>goats</td>
<td>124</td>
<td>71,73</td>
<td>71,73</td>
</tr>
<tr>
<td>sheeps+goats</td>
<td>194</td>
<td>214,53</td>
<td>204,31</td>
</tr>
<tr>
<td>sheeps + beef cattle</td>
<td>105</td>
<td>91,78</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>544</td>
<td>728 ha</td>
<td>618,4 ha</td>
</tr>
</tbody>
</table>

4 - Conclusion

► Future works should to assess, not only the direct investments and benefits, but also the economic and social indirect advantages that these projects entail for these mountain rural territories.

5 - Bibliography

• Carta de Uso e Ocupação do Solo de Portugal Continental para 2007 - COUSC07
• ICNAT. 2013. IFN6 - Áreas de uso do solo e das espécies florestais de Portugal continental. Resultados preliminares. Instituto da Conservação da Natureza e das Florestas, Lisboa 12 pp.