

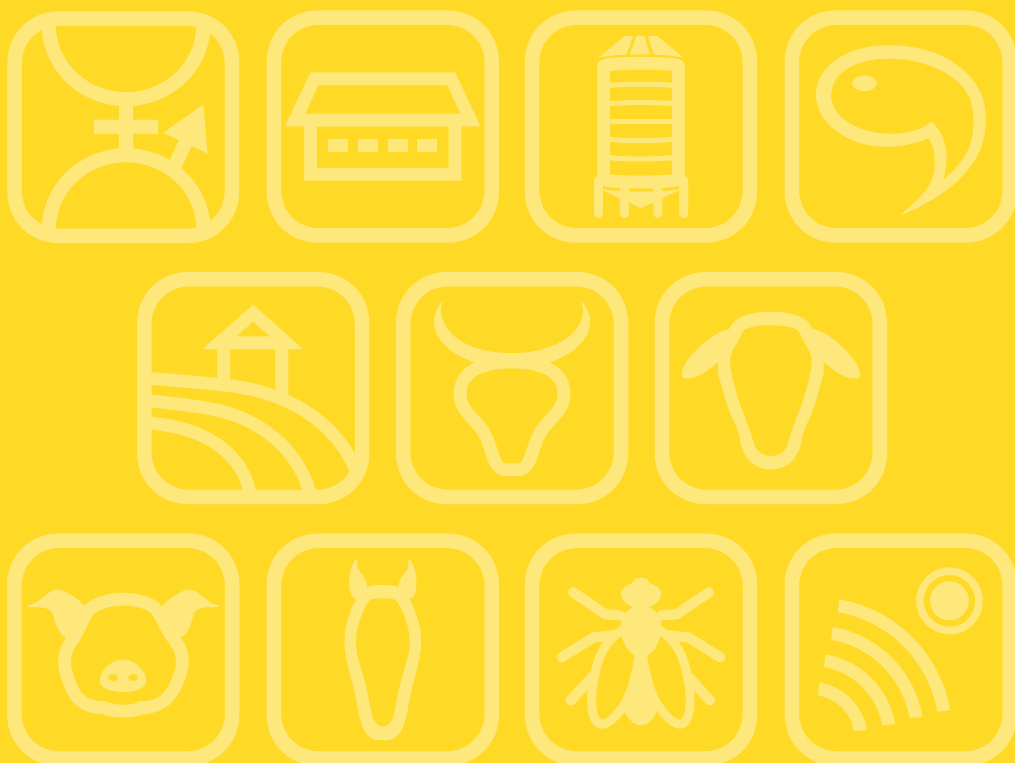
Contribution of grazing areas to small ruminant production systems in the Mediterranean countries

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Climate change threatens livestock production systems because of its potential negative impacts on resources availability (e.g. pasture, supplements, water), which are expected to be important in Mediterranean countries. In order to foresee these potential impacts, it is necessary first to analyse the use of these resources in the different farming systems. We used a questionnaire to characterize land use, general flock management, feeding strategies and the products sold in small ruminant farming systems in Spain, Egypt and Tunisia (n=163 farms, 25 in Spain, 47 in Egypt, 90 in Tunisia). On average, Spanish farms had 216 ha utilised agricultural area (UAA) and 2,843 ha common lands, 228 livestock units (LU), 2 LU/ha UAA, 93 LU/work unit (WU), 1.55 prolificacy (n lambs/lambing) and 1.41 productivity (lambs sold/ewe/year). Egypt farms had 10 ha UAA and 51 ha common lands, 18 LU, 5 LU/ha UAA, 6 LU/WU, 1.34 prolificacy and 0.49 productivity. Tunisian farms had 82 ha UAA plus 86 ha common lands, 20 LU, 1 LU/ha UAA, 9 LU/WU, 1.17 prolificacy and 0.81 productivity. Flocks fed exclusively on grazed pastures during 8.1, 7.2 and 9.4 months in Spain, Egypt and Tunisia, respectively. The percentage of flocks that grazed on rangelands in each country was 81%, 31% and 92%, on forage crops it was 72, 81 and 64%, and on stubble 98, 55 and 68% from Spain, Egypt and Tunisia; respectively. During the rest of the year, flocks were supplemented with sources of energy (concentrate/cereals) and/or fibre (hay/straw/forages). Energy supplementation prevailed in Egypt (84%) and Tunisia (62%), followed by the combination of energy and fibre (13% and 36%), whereas in Spain the main type of supplementation was the combination of energy and fibre (52%) following by only energy (40%). Data obtained here will be fed into a computational model to identify strategies for strengthening the resilience and enhancing the efficiency of small ruminant farming systems in the Mediterranean basin.

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