The influence of climate and soil type on the "montado" production system

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Abstract
In an analysis of agricultural activities in Portugal and according to the Agricultural General Census of 1999, farms were allocated into three real evapotranspiration zones: between 400 and 450 mm/year (EZ1); between 450 and 500 mm/year (EZ2), and greater than 500 mm/year (EZ3). The "montado" system is an agrosilvopastoral production system in which cork- and holm-oaks are characteristic elements. "Montado" was found to be important in all zones, and most of these coexisted with crops. Most of the "montado" area was used for permanent pastures rather than for temporary crops (grains, forages and temporary rangelands). Permanent pastures were mostly found in EZ3 rather than in EZ1 and EZ2, whereas the percentage of surface occupied by temporary crops was mostly found in EZ1. In general, temporary crops did not exceed 30% of the total land used for agricultural purposes (LUAP). The area for grain growing decreased and temporary prairies and forage crops increased with growing evapotranspiration. Most of the farms (80%) had livestock. Mixed stocking was frequent, particularly with sheep and cattle. In terms of livestock units (LU), the stocking rate decreased with permanent pastures and increased with the area for temporary crops and fallow land. Grains were grown mostly on schist soils, while temporary prairies and forage crops were grown mostly on sandstone soils. Data obtained from this 1999 census were compared to those obtained from the same census in 1989.

Key words: real evapotranspiration, permanent pastures, crop patterns, mixed grazing