



## **The construction of fertility in al-Andalus. Geoarchaeology in Ricote (Murcia, Spain, 8th century AD)**

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Traditional irrigated terraces of Spain (known as 'huertas') are among the most emblematic and productive agricultural fields of the Mediterranean. Several of these huertas were first built by Arab and Berber tribes and clans that entered the Iberian Peninsula (al-Andalus) after 711 AD, coinciding with the spread of Islam during Middle Ages (>632 AD). One thousand and three hundred years after their construction they are still operative, presenting a topic case of sustainable and resilient agricultural areas. However, up until recently no data was available regarding the pre-existing features of the terrains where they were built, the timing of their construction nor their construction process. In this communication I will present the results of the study of a palaeosoil buried under an Andalusian irrigated terrace in the huerta of Ricote (Murcia, Spain). Soil micromorphology, physico-chemical analysis (Loss On Ignition, Magnetic Susceptibility, Particle Size Distribution, pH/Electrical Conductivity) and AMS dating allowed to determine that 1) Andalusian peasants selected a highly saline Hypercalcic Calcisol to build up the first irrigated terraces; 2) They clear the slope of bushes by fire; 3) They used the slope soil to build the terrace fill, possibly by inverting the original soil horizonation, and 4) According to the date obtained from the organic matter embedded in the topmost horizon of the palaeosoil (647-778 AD), the original Andalusian irrigated fields of Ricote were possibly built shortly after 711 AD. The communication, in sum, will show through a case study how past peasant societies transformed semi-arid environments to create highly productive agrarian areas.