The plant component of cuisines of Europe's prehistoric farmers, together with the associated transformation equipment such as grinding equipment, cooking vessels and cooking installations will be explored within a five year research project titled PLANTCULT, recently funded by the European Research Council (ERC Consolidator Grant, GA number 682529). The project investigates culinary practice among early European farming communities, from the Aegean to Central Europe, spanning the Neolithic through to the Iron Age (7th-1st millennia BC). A collaboration between the Aristotle University of Thessaloniki in Greece (Host Institution), and partners IPNA-Basel University in Switzerland (Prof. Stefanie Jacomet), University of Hohenheim in Germany (Dr Hans Peter Stika) and Austrian Academy of Sciences (Dr Andreas Heiss) this newly launched project seeks to investigate the culinary transformation of nature into culture through culinary practice, to reconstruct how cultivated and wild plant foods were transformed into dishes in different environmental and cultural contexts and thus to identify the 'food cultures' of prehistoric Europe and their evolution through time. Through the examination of macroscopic and microscopic remains of plant foods, combined with experimental replication of various aspects of food preparation techniques original ethnographic investigations and insights of ancient texts, the project aims to provide a multifaceted and integrated approach of Europe's cuisine during late prehistoric times. This presentation focuses on the cultivation and uses of fruit trees in the project study area and time-frame and offers some first results of the integrated approach adopted within PLANTCULT by presenting results on the grape-vine and the olive, two of the main fruit-trees used in prehistoric Greece.