Name: Angela Scafidi

Title: Subtropical Fruit Production and Water Availability in the Mediterranean

Abstract:
New subtropical fruits such as mango and avocado are emerging in Spain and Italy. These fruits provide much higher profits for small farmers, but as climate change increases water stress in the region, will this new market exasperate dwindling water resources? This research thesis aims to investigate the water needs of these different emerging fruits, the water budget of Spain and Italy, and features a case study on this trend in Sicily. This research highlights the need for more data on water availability, crop water requirements and information about these crops in-situ, especially in Sicily. Findings show that these crops may have a wide range of suitable locations, primarily in southeast Spain and smaller portions of Italy, which may further increase water stress. However, there are many areas for improvement in water use, notably via increasing access to irrigation technology, reducing domestic water consumption, and improving water infrastructure. While it is important to assess how agricultural profiles of particular areas interact with water availability, Spain and Italy may benefit from reducing non-beneficial consumptive water use in other sectors, while potentially supporting subtropical fruit production as a means of sustainable rural development.