

# Mediterranean fig culture (*Ficus carica* L.) in northern Morocco : Resilience of caprifig and female fig trees to climate change

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## Abstract :

The Mediterranean fig tree (*Ficus carica* L.) is a dioecious tree originating from the Mediterranean basin and the Middle East, and it plays a significant role in human nutrition. In Morocco, much like in North Africa, the cultivation of the Mediterranean fig tree (*Ficus carica* L.) dates back to ancient times. In 2017, it covered an area of 55,000 hectares in Morocco and yielded an estimated production of 150,000 tons of figs (fresh and dried). The fig tree ranks among the fruit species of major economic importance, particularly in the northern regions of Morocco. In the context of this study, we investigate the phenological adaptability and fructification periods of the caprifig and female fig tree in response to climatic fluctuations. As a result, the study was conducted in the province of Chefchaouen (Bni Ahmed Commune), where we considered a sample comprising 20 caprifig trees and 40 female fig trees belonging to 8 local varieties. The monitoring was carried out over two years (2020/2021 and 2021/2022) while collecting meteorological elements associated with phenology such as air temperature, relative humidity, and precipitation. The results revealed significant relationships between phenology, fructification, receptivity periods, pollinator insect abundance, and climatic conditions, thus indicating promising responses for the cultivation of caprifig trees in the province of Chefchaouen. Additionally, the study highlighted the importance of preserving local biodiversity and emphasized the potential benefits of an agroecological approach to promote sustainable agriculture.

**Keywords :** *Ficus carica* L.; caprifig tree; female fig tree; phenology; climate.