



CHANGING CLIMATE MAY ALTER OUR MINDSETS ON FAVORITE PLANTS

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Houston's climate is challenging when it comes to gardening: too hot and humid most of the year, which is problematic, if not inadequate altogether, for many temperate and cold climate plants. As a result, subtropical and tropical plants are a staple of Houston's gardens, thanks to their ability to thrive in Houston's summers. However, Houston's occasional cold event can damage tropical and subtropical plants.

Mediterranean plants are typically grouped in the subtropical plant category, but their tolerance of cold and heat varies greatly depending on species and site conditions. Houstonians include many Mediterranean plants in their gardens, especially Italian cypress (*Cupressus sempervirens*), olive (*Olea europaea*), oleander (*Nerium oleander*), and several types of lavender (*Lavandula spp.*), among others.



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Unfortunately, results are often not very satisfactory due to the vagaries of Southeast Texas weather. At Houston Botanic Garden, the February 2021 freeze took a toll on some. Was it really the freeze? Many Mediterranean plants can tolerate the low temperatures registered in February 2021, but that is when they have a dry summer and a cool fall, as it is typical in their native environment, preparing them for winter dormancy.

The warm and humid weather often experienced in Houston well into winter promotes continued growth in Mediterranean plants that should otherwise be dormant at that time, turning them too tender to survive a prolonged cold spell.

What are some tips implemented at Houston Botanic Garden to improve winter weather survival of Mediterranean plants?

- Plant as small as you can. This allows for better plant establishment and a lesser rootball/surrounding-soil-texture difference, increasing survival during wet weather. For example, in December 2021 HBG re-planted the lavender garden with rooted cuttings of *Lavandula x intermedia* 'Grosso' that were less than a year-old.
- Drainage must be excellent, so planting in a mound in very loose (even gritty) soil is fundamental for plant survival during wet episodes in summer.
- Keep the plant as dry as possible and as sunny as possible in summer.
- No direct sun in winter may increase cold tolerance. Although it may seem counterintuitive, the plants will be less likely to keep growing over balmy winter periods, thus remaining dormant, than if they are in full sun. As such, a northern exposure by a wall that is not too tall may be beneficial. If a wall is not available, a planting bed sloped towards the north may help keep the soil cooler during winter, as well as drain water away during summer.
- Plant in the fall as soon as summer heat recedes, not in spring.

Happy planting!