CONTRA COSTA MASTER GARDENERS

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Protect Plants from Sunburn

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Excessive sunlight can burn sensitive plants.

SUMMARY

Although Contra Costa gardeners can select from a huge variety of plants for their gardens, some are sensitive to extreme sunlight and are susceptible to sunburn. Many of these more sensitive species prefer light shade in our climate, particularly in the afternoon. Mulching and increasing humidity can help too.

Q: What's causing the leaves on my agapanthus to suddenly turn pale yellow and flop down? Some leaves have wide, bleached out streaks in them, while others still look healthy?

A: Overcast skies that maintain cool temperatures in Contra Costa County protect agapanthus and other plants from the intense heat and light of summer afternoons. Plants adapt to cool air and filtered light conditions and when the protective cloud layer vanishes, they suffer the devastating effects of sunburn. In addition, wind and infrequent irrigation may leave the plant in a stressed, dehydrated state, so that a few intense heat days can severely damage agapanthus leaves and those of many other landscape plants.

Critically high temperatures caused by solar radiation can lead to cell breakdown, membrane disruption, dehydration and plant death. Sunburn injury can affect not only leaves, as with agapanthus, but also other above ground plant parts such as bark, flowers and fruit. High ambient temperatures are closely linked to sunburn injury. Vegetation with a south or southwest exposure is particularly susceptible to sunburn not only in summer but also in winter. Sensitive species include coast redwood, Douglas fir, white fir, maples and horse chestnut.

Protect Susceptible Plants:

To help reduce temperatures near susceptible plants, add shade and increase humidity. Protect tree trunks from solar radiation by retaining lower foliage or applying light-colored protective material. Provide shade by erecting a fence or screen. Spread a 4 to 6" layer of coarse mulch to retain soil moisture around agapanthus and other plantings. Agapanthus, like many plant species, love sunshine, but they prefer light shade in the late afternoons when temperatures soar and sunlight intensifies.

"Avoid injury or sunburn by careful plant selection, placement, protection from wind and sun, and irrigation."

Other Effects Mimic Deficits:
High light intensity can also lead to foliar chlorosis. The chlorophyll is photo-oxidized in epidermal and upper palisade cells as light intensity increases above the critical level. This level varies according to species, acclimatization and age of the foliage and can affect plants situated near reflective surfaces. Bleached leaves are the result. This symptom can be confused with water, aeration, or nutritional deficits and can be observed on plants such as caladium, Kaffir lily, vine maple, dwarf periwinkle and cast iron plant.

Relocate Plants:
Sometimes the sun/shade ratio in a planted area can change, especially after heavy tree pruning or tree removal. The resulting air circulation is beneficial but the appropriateness of the location of remaining plants may have to be reassessed. Plant sensitive species in sun protected areas. Ensure that they receive shade during high heat and intense light-filled hours of the day. Transplanting agapanthus to a shadier area may provide a solution but keep in mind that agapanthus require six hours of sunlight a day to flower

Avoid the Problem:
Injury caused by sunburn or high light intensity can be avoided through careful plant selection, placement, protection from wind and sun, and irrigation.

For More Information:
You can obtain more information at: http://www.ipm.ucdavis.edu/PMG/GARDEN/ENVIRON/sunburn.html

A plant affected by sunburn.

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