

Master Gardener Newsletter



University of
California

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Lettuce be faithful, lettuce be kind, lettuce be patient, lettuce really love one another.....goes with my jokes below!

So what is this plant "chilling" thing all about?

Franz Niederholzer (UCCE Advisor prunes) gave an informative talk at a local farmer meeting on what chilling is, different types, different fruit tree requirements, a little physiology etc.. I thought this would be an opportune time to talk cold temperatures and some requirements.

Dormancy and rest are two physiological conditions that occur in plants. Dormancy is triggered when shoot tips stop growing due to **external** conditions that are unfavorable for growth, like winter temperatures. Rest is the **internal** plant response to lower temperatures and changes in day length that appear to be necessary in many species to break dormancy and initiate flowering in the spring. So, dormancy is growth stoppage due to bad weather, and rest is growth stoppage to pave the way for good weather in spring.

The need for the bud to progress through a resting condition is an evolutionary adaptation, a safety mechanism to assure that buds do not grow while inclement weather still prevails. The duration of exposure to cold that is required by a given plant to resume normal shoot growth in the spring is its *vernalization* or *rest period*; the amount of cold needed to satisfy the rest period defines its *chilling requirement*.

The technique for estimating rest requirements for different species has been refined. For most pome and stone fruit buds and seeds (daffodil and tulip bulbs), it is 35°F-54°F, which seems to be the optimal temperatures for satisfying the chilling requirements. Surprisingly, temperatures over 64°F during this rest period can actually take time away from the total chilling hours. Shoots collected periodically from trees growing in the orchard are placed in vases and forced into growth in a warm greenhouse. Buds on shoots collected early in the fall before exposure to cold do not grow. With prolonged chilling, the number of breaking buds increase and the growth rate accelerates. The degree-hours required for 50% of the buds on these shoots to break determines the chilling requirement for the particular cultivar. November 1 through March 31 is the typical period for calculating chilling hours. This is due to the consistent cold weather characteristic of this time. It can start earlier, or later, and last longer than March 31.

Other factors that can affect rest include light, rootstock types, low soil moisture, and heat stress during the previous summer. By far, the most dramatic way to break a resting cycle is by simply meeting the chilling requirements.

Typical chilling requirements for fruit and nut trees:

Almonds	400-550 hours
Peaches	750-950 hours
Prunes	800 hours
Pears	600-800 hours
Apples	1200 hours

So, refrigerate those tulip bulbs, remember to not store apples, bananas and other ethylene producing fruits in the same bin as your bulbs, and visit www.fruitsandnuts.ucdavis.edu. Once at the website, click on weather services and then chilling unit accumulation, then pick your county and see how "cool" you are! This website also has an excellent description of what I wrote earlier and may be easier to understand.

Giggles and Grins

Why do potatoes make good detectives? Because they keep their eyes peeled.

What vegetable can tie your stomach in knots? String Beans.

What did the carrot say to the wheat? Lettuce rest; I'm feeling beet.

What do you call a grumpy and short-tempered gardener? A snap dragon

What can you make from baked beans and onions? Tear gas

What do you call a mushroom that is busy with everyone's drinks and is the life of the party? A fun-gi.

What did one olive say to the other when it fell off the table? Ol-live!

Habitat Re-leaf Project

If your master gardeners are planning on helping out people in need on our gulf coast, they can make a check out to Habitat for Humanity, c/o Cindy Griffin (Executive Director), P.O Box 55634, Jackson MS 39296, but be sure to earmark it for Gulf Coast Landscape Program. I am the coordinator of that effort, and can guarantee that not only 100% of it - every penny - will go towards plant materials (bought at wholesale, making it go even farther), but also photos will be sent to you of Master Gardeners working with proud home owners in planting!

Project Coordinator: Rushing Felder



Plant of the Month

Picture above

Dischidia pectenoides - Dischidia

Dischidia is an epiphyte from southeast Asia and Australia. It is closely related to Hoya but its flowers are not a showy. It has pouch-shaped leaves--in fact, this species has the most complex pouches of this genus. Why are these pouches interesting? In a word.... ants. Some species have the pouches where ants can build nests within; others have disk shaped leaves pressing against the trunk which again act as ant shelters. Other members of this genus have either flat, thick leaves or knob-like leaves that may not attract the ant's attention as quickly, but aerial ant nests are usually found around these species. *D. pectenoides* has showy bright red flowers, and is the most popular species among homeowners.

USDA Zones 3-10

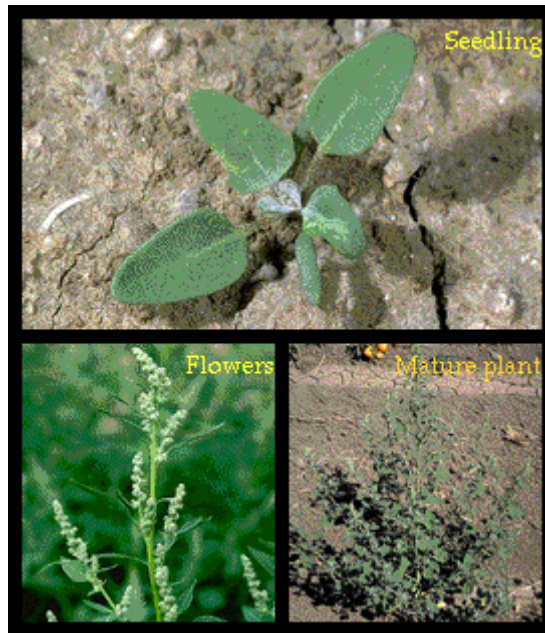
Sunset Zones 1-24



Disease of the Month

Puccinia spp. - Rust, Lawn rust

The weather lately has been perfect for developing rust in lawns. Rust is favored by humid weather with day/night temperatures ranging from 68°F- 86°F. Bluegrass species are the most susceptible and rust on bluegrass can be a mostly reliable way to identify where the bluegrass is in your lawn. Rust is easily controlled by good care practices which include: maintaining 2-2.5" mowing height, removing lawn clippings (removes future disease source), adequate but not OVER fertilization, mowing frequently, adequate but not over-watering, and my personal favorite: don't plant much or any bluegrass!



Weed of the Month

Chenopodium album - Common Lambsquarter
Chenopodiaceae-Goosefoot family

1-6 foot tall annual, much branched, striped pink or purple, leaves alternate. Flowers are small, inconspicuous, greenish-grey, mealy and crowded on the axils and tips of the stem. This weed is common everywhere, both in cultivated and uncultivated fields, is very competitive and serves as the host for beet leafhopper which transmit the viral disease curlytop to sugarbeets. When plants are young, they can be eaten, and are tasty in a salad or as greens. Older plants tend to be very bitter. Their seeds are germinating now! Plants are easily pulled up by the tap root when young, so they provide a good opportunity to practice your hoeing techniques!

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