

## Meetings and Announcements

### Fall Horticulture Class—Tehachapi

I am pleased to announce a fall horticulture class to be given in Tehachapi. The meeting location will be the Valley Oaks Charter School (we met there in 2014), on Thursdays, 5:30 – 8:00 pm, beginning August 30. I anticipate 12 sessions, although I don't have a syllabus yet. Cost will be \$75. I thank Valley Oaks and its principal, Tom Karnes, for cooperating for this class. Valley Oaks Charter School is located at 20705 South Street. That's near the Golden Hills / Old Town area.

### Tips for Saving Water in Landscape Irrigation

We are entering summer, the time of highest water use for plants in landscapes, orchards, and gardens. Almost all plant species need summer irrigation in Kern County landscapes, but too much irrigation can be as detrimental as too little. To maintain plant health and manage costs for outdoor water use, here are a few tips to consider.

It's helpful to walk through the irrigation system while it is running, perhaps every month, to check for coverage, to prune back plants that may block nozzles, to see that all valves turn on and turn off, and that sprinkler heads are operating. Sometimes a pop-up head will need to be readjusted for height, or a taller sprinkler head substituted. Sometimes dirt plugs the nozzle so cleaning is needed.

The best time to irrigate in most home situations is dawn, or about 4-6 a.m. That is when winds diminish and temperatures are lowest so water does not blow away or evaporate quickly. Evening irrigation can lead to leaf diseases if water is allowed to stand on foliage during the night. During exceptionally warm weather, it is certainly okay to irrigate in the afternoon to cool turfgrass or give plants extra water. Water droplets do not focus the Sun's rays and cause leaf burn.

A rule-of-thumb is to irrigate to fill the root zone, and that implies water delivery sufficient to penetrate soil several inches to several feet, more easily accomplished in agriculture than in home landscapes. After irrigation, one can check water penetration with a screwdriver or a garden trowel or shovel. Frequent short irrigations can lead to shallow root systems with little capacity to withstand dry conditions. However, keeping plants wet can lead to root rot in many woody species.

Irrigation scheduling is about both frequency and duration; that is, how often valves come on and the length of time each valve remains open. In general, it is best to set duration for each station so as to fill the root zone and then to add or subtract days depending on the season. The question, "How many days per week should irrigation be applied, and how many minutes should the run-times be?" is indeed a good question but difficult to answer for a home landscape. It is probably easiest and most effective to start with clock settings and then monitor how fast the landscape dries out. In other words,

irrigate and monitor, and then adjust.

Home water bills often contain information, such as a bar chart, showing water use over the past year. Plant water needs in the southern San Joaquin Valley vary by about a factor of 10 during the year, with outdoor water needs almost zero in the winter months. If irrigation is turned off during winter, one can see what the indoor water use was during that period, and therefore what the additional amounts are for summer months. If irrigation is matched to season there will be a climb in spring, highest water use in summer, and a decline in autumn. If the water bill shows the same amount of use for all 12 months, it is likely plants are being over-irrigated most of the year.

For the engineers among us, the baseline water use rate for plants in the Bakersfield area is about 0.25 inches per day in July—that's the average but daily use can be higher if temperatures are well over 100°F or drying winds are present. (For the Ridgecrest or Mojave areas, the baseline can be 0.30 inches per day.) Those values do not imply that 0.25 inches of water need be applied every day, but that value does allow us to estimate water needs over period of days or weeks. One can calculate the water needed by a landscape by measuring the square feet of the landscape and multiplying by water use as a depth, and then converting to volume with the appropriate unit conversions. By doing so and comparing with a water bill we can quickly see if we're about right in terms of water applied.

### Early Announcement--2019 Horticultural Study Tour: Thailand

I am in the process of developing an itinerary for our next (10<sup>th</sup>) Horticultural Study Tour, this time to Thailand. Our approximate date frame is mid-February, 2019, since the weather in Thailand is cool and dry at that time.

Thailand is home to a number of botanic gardens, and a visit would provide exposure to the fascinating culture of Asia. The best definition I have ever seen of sustainable agriculture comes from the demonstration farm at Mae Rim, near Chiang Mai. I would expect that our group would visit Bangkok and Chiang Mai, and we may also arrange a side trip to Angkor Wat in Cambodia. Lodging and other expenses tend to be relatively low in Thailand.

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