University of California Cooperative Extension – Kern County

NEWS RELEASE

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Monitor Citrus Soil-Water Status Through Late Fall and Winter

Citrus is an evergreen subtropical crop and does not have a true winter dormancy period like those that most of the other perennial fruit crops that are grown in the San Joaquin Valley have. Citrus will continue to transpire throughout the fall and winter although the winter water demands are much reduced compared to the summer irrigation requirement. Even in early December an acre of mature citrus trees requires about 600 to 800 gallons of water a day. During most winters in the southern San Joaquin Valley, especially during this our latest drought, insufficient precipitation occurs to meet the evapotranspirational demands of the trees some months. Not only is rainfall inadequate, but drought will reduce fog. Clear, sunny, and warmer winter days greatly increase the amount of water lost by trees. The past few winters, defoliation of citrus trees has been unusually common and severe in some citrus groves. Water stressed trees become more susceptible to various mite species, which themselves can further increase leaf and fruit loss.

Water stress is most apparent on trees growing on the hilltops or on south-facing slopes where the soils tend to be somewhat shallower, where water may runoff before infiltration into the soil, where salt and boron tend to be higher, and where the effects of wind and sun are more pronounced. Where and when fruit is being protected with frost water, water stress is not likely to be a problem. However, after the fruit is picked, most orchards will cease being protected with water. In warm winters, frost water may not be run at all. Orchards, especially in drought years, should continue to be monitored for soil-water moisture whether fruit is present or not. Adequately watered trees will better withstand the effects of dry Santa Ana winds that commonly occur in late winter as well as unexpected cold weather blasting in from the north.

Some irrigation districts do not allocate water during the winter, so growers in these districts need to ensure that the soil-profile is full prior to the last water deliver. January usually ushers in the beginning of our rainy season, but when the skies refuse to cooperate with rain, growers will continue to find it necessary to turn the valves to keep the leaves green and on the tree. ■