

David G. Hallauer
District Extension Agent
Crops & Soils/Horticulture

Water Requirements

I really hoped I'd get through the growing season without monitoring for soil moisture deficiencies. Unfortunately, its summer in Kansas and that isn't possible. Both Kansas Mesonet soil moisture monitoring sites in the Meadowlark Extension District shows soil moisture levels dropping. With the weather forecast as it stands today, that trend will likely continue.

How much water *does* a corn or soybean crop need from now until maturity? Corn at beginning dent requires five inches of water to reach maturity. Soybeans will need from seven to nine to finish the crop. Some of that can still be obtained from soil moisture, but those declining levels could definitely pose some problems as the crop heads towards maturity.

You can check out soil moisture levels for yourself at the Kansas Mesonet soil moisture page (<https://mesonet.k-state.edu/agriculture/soilmoist/>). If you're looking to learn more about the Mesonet program, consider attending our Fall Plot Tour, on Thursday, August 19th starting at 4:15 p.m. at the Colonial Acres Event Center (Taylor Insurance Services) in Oskaloosa. Mesonet manager Christopher Redmond will talk about the Mesonet program. He'll be joined by KSU Soil Fertility Specialist Dr. Dorivar Ruiz-Diaz to talk about fertilizer best management practices.

At the conclusion of the program, we'll have a sponsored meal from Tarwater Farm & Home. For the meal count, please RSVP by noon on August 17th by contacting the Meadowlark Extension District Oskaloosa office at (785) 863-2212 or e-mail me at dhallaue@ksu.edu. Thank you to Taylor Insurance Services and Tarwater Farm and Home for their generous sponsorship.

Watering Newly Planted Trees and Shrubs

It goes without saying that newly planted trees and shrubs lack the root system of established trees, meaning they need some additional watering attention in hot/dry/windy summers. What does need some explaining is that 'newly planted' should probably extend to trees even up to three years old.

If you've got 'newly planted' trees, plan to provide at least 10 gallons of water per week (sandier soils will require much more...) to keep them in good condition. If you're dealing with trees that are larger or older, even more water will be required.

When watering, focus on getting water deep in to the soil. Use a bucket with a hole in it or perforated soaker hose to deliver water across the tree's root system (avoid watering all in one location) so it can soak in to the root zone and be less affected by surface evaporation. Whatever method you choose, wet soils to at least 12 inches deep. Use a metal rod, wooden dowel, electric fence post or screwdriver to check depth. Dry soil is much harder to push through than wet.

NOTE: for fruit tree growers, even *after* they are well established, fruit trees can be affected by high temperatures that can cause fruit to drop, smaller fruit, and even reduce the development of fruit buds for next year's crop. Check the moisture as recommended above. If you can't push the rod or screwdriver into the ground to a depth of eight to 12 inches, additional water may be needed. Check soil moisture again in a week to see if another watering is needed.