

December 30, 2013

SAVING WATER & FUEL

Seventy Eight farmers in Gage, Saline, and Jefferson County are part of a joint irrigation scheduling project designed to save them money by lowering the amount of applied water without lowering yield. The education and cost - share efforts are a joint effort of the University of Nebraska Extension offices in Beatrice and Wilber, the Lower Big Blue Natural Resources District, and a source Water Protection Grant received by the Beatrice Groundwater Guardian Team. The combination of efforts have placed 327 watermark sensors in the field along with 32 ET Gages, 26 handheld readers, 35 data loggers, and three soil probes. The watermark sensors are set at one, two and three foot depths in the fields. The probes absorb water at the current water level in the soil. By taking an electrical resistance reading the handheld readers and data loggers can be calibrated to give the farmer valuable information about available water for the crop and when needed irrigation will be needed. Most farmers in past trials have lowered water use by one or two rounds of the pivot. ET gage's (spelling used by manufacturer) mimic the evaporation and transpiration needs of the crop and give us a clue to future water needs by looking at the past week. The water use by the ET gage is adjusted by a coefficient calibrated for the size of the crop.

Saving water, energy and money without hurting yield requires a lot of skill from the farmer. It is not as simple as getting a reading from the sensors and ET gage and knowing when to push the irrigation button. Here are a few of the variables the farmer must weigh in using the data: well capacity, acres needed to cover, crop, water source, weather (many wells are on load control electric and can be shut down from 4-12 hours per day), soil type, crop stage, rainfall, etc. Add it all together and saving water while achieving top yields is an effort. An effort worthwhile for the farmer with the current energy costs. Saving irrigation water is a worthwhile effort for the future of all water users in conserving this important resource.

Do these same water saving ideas apply to homeowners and lawn and garden use? They most certainly do. A quick guideline for home owners is to decide before the season starts where they will water and where they won't. Shifting gears in the summer heat is not a good plan.

Choice one: Don't water; Keep the mowing height up to 3 inches, limit fertilizer, and allow the yard to go dormant when it gets dry. Kentucky bluegrass will go into dormancy after two to three weeks without rain and tall fescue three to four weeks without rain.

Choice two: Water Selected Areas; Grass or a well mulched garden will use about one inch of water per week in 80 - 90 degree weather. When we get to late July and August with 95 plus weather and lower humidity, water use will increase to 1.5 to 2 inches per week. Try to apply water once or twice per week. Watering in early morning hours when the dew is on can lower the wet hours which helps to keep fungi infections from taking advantage of the wet plant

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