U Of I Research Benefits Irrigated Growers

URBANA, ILL.

Irrigation is the lifeblood of Mason and Tazewell Counties. Resting on the western edge of the Mahomet Aquifer, those counties are able to tap vast groundwater reserves allowing them to raise unique crops including popcorn, green beans, peas, potatoes, and even horseradish. As with any resource, irrigation comes with its own set of challenges. University of Illinois Extension has been working with the Central Illinois Irrigated Growers Association (CIIGA) to address those challenges via conducting research at CIIGA's Mason County research plot.

Do irrigated sandy soils need sulfur? U of I Extension has been investigating the subject of sulfur fertilizer at CIIGA for the last two years. Sandy soils fail to hold nutrients as well as darker colored soils and sandy soils also provide less sulfur due to less organic matter. Combined with reductions in sulfur deposits via acid rain, growers are left with very significant sulfur questions on irrigated fields. Dr. Fabian Fernandez, Soil Fertility Specialist at U of I has conducted a series of trials at CIIGA. The jury is still out on the need for sulfur, so research continues.

Are there biological alternatives for weed control? From 2009 to 2010 Dr. Loretta Ortiz-Ribbing explored biological weed control alternatives at CIIGA. Weed management is a significant issue especially in specialty crops where herbicide options are sometimes limited. Dr. Ortiz-Ribbing's research found that biological weed control (control via weed-damaging pathogens) can decrease weed pressure, but it does not provide the same level of weed control typically encountered when using synthetic herbicides.

How does irrigation influence pressure from silk clipping insect pests? U of I Extension decided to investigate that problem by conducting a silk clipping study in 2008 and 2009. The purpose of this research was to determine if irrigation allowed silks to recover quickly muting yield losses from pests that clip corn silks. Following that research, U of I Extension found the opportunity to correct silk clipping injury was much narrower than once thought. Growers learned that they need to be much more vigilant when scouting fields for silk damage.

What other research continues at CIIGA? U of I Extension is currently studying bio char as an amendment in irrigated sandy soils, nematode effects on yield, and the relationship between soil fertility and disease. Results will be forthcoming. Δ