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

Plant Nutrient Analysis in Corn

An economical and environmentally sound corn nutrient program often lies with the efficient use of nutrients in that system. In many cases, the base of that program is a soil test, but another useful tool that can be especially helpful as we fine tune our nutrient management system is plant analysis. This is typically done from two different angles.

Diagnostic sampling can be done at any time and is particularly valuable early in the season when corrective measures can be taken to 'fix' problems. The key: collecting representative samples from both normal and problem areas of the field for comparison purposes. If plants are less than a foot tall, submit the whole plant cut off at ground level. For taller plants and up until reproductive growth begins, collect the top, fully developed leaves. A soil sample from normal and problem areas can be a help as well.

For general monitoring or quality control purposes (or for diagnostic sampling of plants in the reproductive stage), plant leaves should be collected as the plant enters reproductive growth. Collect 15-20 ear leaves (the first leaf below and opposite the ear) should be randomly collected at silk emergence, before pollination, and before the silks turn brown. Avoid sampling under stress conditions (drought, etc.) to reduce the potential for misleading results.

Allow the collected leaves to wilt overnight (to remove excess moisture), then place in a paper bag or mailing envelope to ship to the lab. Avoid the use of plastic bags or tightly sealed containers that induce rot and decomposition during transport. Label clearly.

What nutrients should you be testing for? We'll discuss that more next week!

Mulching Tomatoes

With daily high temperatures now more often in the 80's than not, it's time to mulch tomatoes!

Because tomatoes prefer even soil moisture levels, mulch is a must for preventing excessive evaporation, plus the side benefits of weed suppression, moderating soil temperatures and preventing soil crusting (crusted soils restrict air movement and slow water infiltration).

Hay, straw, and grass mulches are very popular, but have to be used with care! Avoid hay/straw mulches with lots of weed or volunteer grain seeds or you may be creating a larger weed issue than you are providing suppression! When using grass clippings, apply in thin, dry layers two to three inches thick. Wet clippings can mold and become hard, limiting water infiltration. Grass clippings from lawns treated with a weed killer should also be avoided to prevent herbicide damage.