Changes To UK Soil Tests Will Increase Accuracy

LEXINGTON, KY.

To ensure accurate soil pH readings, the University of Kentucky's Soil Testing Laboratory has developed a new method for conducting soil tests. This method will be implemented beginning Jan. 1, but those who submit soil samples likely will not notice the change because the results will continue to be in the same format, said Frank Sikora, UK soil testing coordinator.

The lab, which is a part of the UK College of Agriculture's Division of Regulatory Services, will switch to testing samples in a high concentration of potassium chloride rather than the traditional soil and water mixture.

The change was made to compensate for salt in the soil samples, which can vary throughout the year. High levels of salt accumulate in the soil when plants do not intake all the available fertilizer. This effect can occur anytime but is particularly prevalent in drought conditions. Since most of the state's drought periods occur in the fall, soil samples collected then are affected more by salt than samples taken in the spring and winter. Salt levels in soil tend to diminish when fields receive adequate rainfall to leach out the salts, Sikora said.

Salt in the soil causes low soil pH readings in samples tested using the older method. The lower pH readings could cause growers to make unnecessary lime applications or question the effectiveness and quality of applications previously made to a field. The new test will eliminate the effect of salt in the soil sample, providing a more accurate soil test.

Once the soil test is completed, lab technicians will use a calculation to convert the results from the potassium chloride test into the more familiar test to avoid confusion among growers.

"We know the relationship between the potassium chloride pH test and the regular pH test, so we will still report the pH using the method that everyone's familiar with," Sikora said. Δ