USDA-CSREES 2007 National Water Quality Conference

Very High Soil Test Phosphorus: Is Starter Fertilizer Necessary?

Approximately 50% of all soils in North Carolina test Very High for phosphorus (P) due to historical applications on tobacco and a large animal industry. Producers still apply starter application rates of P (approximately 30 lb P2O5) regardless of soil test P (STP) levels. Many other states have similarly high levels of STP. During the growing seasons of 2005 and 2006, we conducted trials on producer's fields testing very high. Starter fertilizer, which always contained nitrogen and either contained or did not contain P, was applied. Because we were working with producers, the starter application was in many forms; banded, dribbled, broadcast and sprayed. At a later date, all plots received the remainder of nitrogen needed for optimum yield. Data collected included STP levels, tissue concentrations of P and N, color, number of plants, and yield. A very cold spring was experienced in 2005 and alternating cold and warm temperatures existed in 2006. There were no differences in any of the parameters measured for 2005. These data, along with results from 2006, will be presented.

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