

SOIL TEST VALUES AND THEIR POSSIBLE IMPACT ON LEVELS OF DISSOLVED REACTIVE PHOSPHORUS IN LAKE ERIE TRIBUTARIES

Did you know that . . .

- . . . there is ample evidence that phosphorus concentration in water runoff and eroded sediment increases as the soil test level of the surface two inches of the soil increase?
- . . . in addition to surface applied fertilizers and manures, no-till and other forms of conservation tillage can increase soil test phosphorus levels near the soil surface through residue decomposition and the lack of tillage?
- . . . the potential for phosphorus loss from both surface runoff and, in some situations, subsurface leaching increases as soil test phosphorus levels exceed the critical soil test values established for crop needs?
- . . . in Ohio, 42 percent of soil samples show the need for annual phosphorus fertilization to avoid profit losses for major crops? (58 percent show no need?)
- . . . according to A&L Great Lakes Laboratories data, more than 20 percent of current soil test phosphorus values in NW Ohio were in the “very high” category, with slightly more than 50 percent in the “high” and “very high” categories when combined?
- . . . as erosion control Best Management Practices are successfully adopted, particulate phosphorus concentrations and loads go down, while dissolved concentrations and loads often increase?
- . . . that for an incremental increase in soil test phosphorus values, there is a greater increase of dissolved phosphorus in runoff from poorly drained clay loams than from well drained silt loams?
- . . . that the adoption of conservation tillage practices in NW Ohio increased significantly in the mid 1990’s about the same time dissolved reactive phosphorus concentrations and loads in Lake Erie tributaries began to rise?

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