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National Survey of phosphorus levels in private home lawns: Comparison among States

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Objectives:

The objective of this internship was to conduct a survey among different states in order to assess the levels of phosphorus in home lawns across the nation. Phosphorus is a chemical element found in the environment and an essential component in all living elements. Besides the environment, phosphorus can be found in lawn fertilizers. The over abundance of phosphorus stimulates excess growth of plants and algae which tend to consume large amounts of dissolved oxygen, potentially suffocating fish and other marine animals, while also blocking available sunlight to bottom dwelling species. Phosphorus enters waterways through fertilizer runoff, sewage seepage, natural mineral deposits, and wastes from other industrial processes.

Method:

A literature review was conducted to gather information regarding phosphorus. Additionally, various laboratories across the nation were contacted in order to obtain information on sample sizes and sample levels of home lawns soils from different states. The data was then organized into charts according to the states, the extraction methods used and the levels (high, medium, or low).

Results:

The over abundance of phosphorus has created a problem for ecosystems and human society. The results indicate that in some parts of the country there are elevated levels of phosphorus which present a problem for ecosystems. Further measures need to be put in place in order to address this issue such as zero phosphorus fertilizers.