Milorganite Helps Protect Our Waterways!

Over the past few years, the phosphorus (P) controversy has taken center stage throughout the green industry. Excessive amounts of phosphorus leached into lakes and streams can cause algae and weeds to grow very rapidly, damaging the quality of water surfaces. This algae growth is known as eutrophication. Eutrophication is the process in which oxygen is removed from the water by the decomposition of large amounts of organic matter.

Lawn fertilizers containing P have taken a bad wrap in recent times for contributing to the eutrophication process. In metropolitan areas, runoff from lawns flows into storm sewers, potentially emptying into our rivers, lakes, and streams. Phosphorus bans have been put in place all across the country, calling for phosphorus free fertilizers and mandatory soil testing before P is applied, in an attempt to reduce phosphorus leaching into our waterways.

Why do plants need P?

Phosphorus plays a role in the photosynthesis process- essentially it helps the plant to "breathe". Phosphorus aids in energy transfer and storage and helps plants efficiently use water. Phosphorus is associated with root development. Plants grown in soils lacking the proper amounts of P will not likely produce fully developed root systems.

Phosphorus also plays a significant role in maintaining a healthy lawn, and a healthy lawn plays an even bigger part in keeping our waterways clean. A thick, lush lawn acts as a filtration system cleaning and purifying water before it runs into our lakes. Research shows that lawns fertilized with P contribute less run-off than lawns that have not received any applications at all.

Not all phosphorus is created equal

Water extractable phosphorus (WEP) is relatively new terminology used to explain how easily phosphorus in fertilizer moves into groundwater. A low WEP percentage means that P is less likely to leach into groundwater, whereas a high WEP is more likely to move into groundwater.

Research indicates that naturally occurring phosphorus "binds" to Milorganite and in turn becomes more readily available for plant uptake, and less likely to leach into rivers, lakes, and streams.

"The WEP values for Milorganite suggest that Milorganite is a low environmental P risk biosolid."*

continued

Synthetic fertilizers contain over 85% WEP, therefore a high percentage of phosphorus is likely to relocate into the groundwater, thus contributing to the eutrophication of lakes and streams.

Milorganite organic nitrogen fertilizer contains only 2% WEP. Research indicates that the P in Milorganite is slow release, readily available for plant consumption, and, in turn, will not leach into waterways. This research concludes that ***"the WEP values for Milorganite suggest that Milorganite is a low environmental P risk biosolid."****

How is this possible? To make a long story short- Milorganite fertilizer contains a high amount of iron. The phosphorus "binds" to the iron in Milorganite and in essence waits until the roots are ready to take up the P, thus keeping it from leaching.

Not all fertilizers are created equal

Research conducted by University of Florida compared Milorganite phosphorus to other fertilizer P sources. The research showed that the leaching potential was greater with the inorganic fertilizer sources, and that Milorganite's slow release P source provide sufficient amounts of P for plant growth, with very little P leaching. This same research states that "Less than 20% of the total P applied leached for nitrogen based Milorganite treatments, suggesting that most Milorganite P is ultimately insoluble and will not leach."*

So what??

The "so what" of the story- Milorganite's phosphorus acts differently then the P in other fertilizers. The phosphorus is slow release, available to the plant as the plant requires it in adequate (but not excessive) amounts, therefore, making it less likely to leach. Naturally occurring P is typically chemically bound up in the soil and not available for plant uptake. Research indicates that naturally occurring phosphorus "binds" to Milorganite and in turn becomes more readily available for plant uptake, and less likely to leach into rivers, lakes, and streams.

Milorganite is the answer to all your fertilizer needs. It's a slow release, non phosphorus leaching, water insoluble fertilizer. Milorganite is not only great for lawns, but for trees, shrubs, annuals, perennials and vegetable gardens!

*Characterization of Milorganite biosolids relating to phosphorus potential for soil water movement. George A.O'Connor, PI, Sampson Agyin-Birikorang, Matt Miller, Sarah Chinault. University of Florida.

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