

# Comparing Organic and Inorganic Fertilizers

All fertilizers should provide nutrients to plants for growth and development. The sources of nitrogen in fertilizers can differ, being either organic or synthetic. Do organic fertilizers have a performance advantage over inorganic versions?

According to Dr. Mike Agnew of Iowa State University, manufacturers of organic fertilizers claim many additional benefits. These include:

- reduced disease activity
- thatch build-up reduced
- thatch reduction
- reduced soil compaction
- nitrate movement reduced

The physical properties of some organic fertilizers **could** allow some secondary benefits from their usage.

The nitrogen in organic fertilizers is present in amine groups and must be converted to ammonium before it can be absorbed by the plant, a process called ammonification. As organic matter is decomposed, amine groups are converted to ammonium ions.

Ammonium ions can also be converted to nitrates. This process is called nitrification.

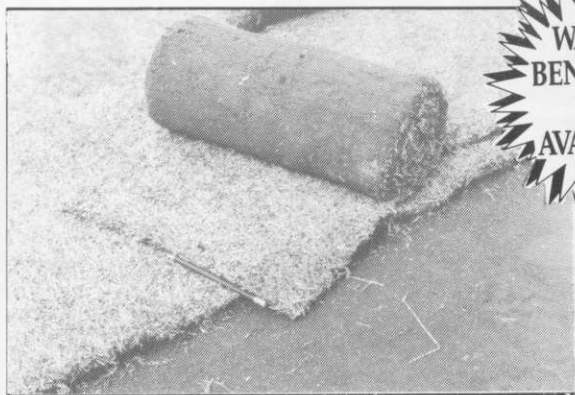
Natural organic fertilizer sources include plant by-products, animal waste and sewage sludge. Interest has been renewed in organic fertilizers due to environmental issues and sustainable agriculture, Dr. Agnew reported. "There is growing evidence that some natural organic nitrogen sources reduce disease activity on golf course greens," he said. Yet he cautioned that diseases are only suppressed so fungicide treatment may still be necessary.

Iowa State University research has not found a link between reduced thatch build up and organic fertilizers. The microbial activity was suspected of enhancing the decomposition of thatch, but this experience was not documented. Build-up of organic matter in the soil and reduced nitrate movement are other potential benefits.

Any benefits other than enhanced plant growth and development are secondary to the real purpose of fertilizer, regardless of its origin. When choosing a fertilizer program, your sales professional can help you make the best choices for your needs.

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