

# Amendments and Supplements: Pros and Cons

Overuse, compaction, and lack of adequate management can decrease sports turf quality. Today, many professionals are using soil amendments or supplements to enhance their root zones and improve the health of their sports fields.

Our desire for tougher playing surfaces and our need to reduce waste has led to some very novel soil supplements, especially in the compost market. Imagine your turf feasting on compost derived from blueberries, Atlantic crab, herring, and beer residue. Whether or not these gourmet composts are more beneficial than traditional fair is still a topic for debate. Your best bet is to compare labels or call the manufacturer for more information on the nutrient composition of the compost. Agriculture and Agri-food Canada requires manufacturers to document all relevant information on their product labels.

Typically, the term amendment refers to any material added to the soil to enhance plant growth through the modification of the soil's physical characteristics. Organics such as compost or manure fall into the gray area between soil supplements and fertilizers because they also supply additional nutrients. Organic supplements help provide and retain nutrients, increase biological activity, and aid in aggregate formation thus improving soil porosity.

Synthetic compounds and starches have also been used as soil conditioners. They have been used to improve soil structure,

decrease erosion, increase infiltration, and improve water-holding capacity.

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Substances like sand, calcined clays, natural minerals, or man-made materials are inorganic and are used to optimize the physical growing conditions in the soil by changing the texture of the soil. Choosing the right supplement can improve water, air, and nutrient use thereby increasing grass performance and decreasing maintenance.

## The Right Stuff

The most effective conditioner is the material that can cause the greatest im-

provement in soil characteristics per unit volume of soil. There are a number of factors to take into consideration before buying an amendment or supplement. These include:

- **Stability:** Is the material physically, chemically, and biologically stable? Materials that breakdown or change shape due to compaction or weathering may lose their ability to enhance soil physical conditions.
- **Consistency:** Is the product of consistent quality? Uniformity from batch to batch provides you with the assurance that you will get the desired result each time when applying the amendment at the manufacturers suggested rate.
- **Suitability:** Is the supplement physically and chemically suitable for your needs? A material that is difficult to handle, hard to mix, has an unacceptable pH, poor cation exchange capacity, or heavy metal content may lead to previously unanticipated problems.
- **Monetary:** Is the material readily and economically available? The product should be easy to get and fairly inexpensive. ♦

—Paul Grünthal has a Masters degree in soil science from the University of Guelph and currently works in Toronto as a Technical Specialist examining the potential of waste-based soil supplements.

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