EDUCATION RECAP

Charles Anfield, CGCS, *Heritage Bluffs Golf Course*

Organics, Composting, and Soil Health

The MAGCS returned to Calumet Country Club for the April Meeting after getting rained out in 2012. It was a glorious spring day that featured a wonderfully conditioned golf course and some excellent education.

Jeff Leuzinger, Sales Manager for Pearl Valley Organix, provided an informative overview on all things organic.

What is organic? The definition seems to be something different to everyone. By definition it is material that is comprised of both carbon and hydrogen. In the "organic food world" it has become synonymous with a very strict scrutiny of ingredients and processes that make up an organic product. In turf, the term has come to define a few different things: soil amendments, soil conditioners and fertilizers. These products are comprised of mainly: bio solids, animal products/proteins, yard waste, food waste, and animal manures.

Products that are OMRI (organic material review institute) listed have a very strict quality control approval process. This is a "stamp of approval" that designates the product as passing the test for organic food use.

Some organic turf products must be composted or broken down first before the product is ready for market.

The benefits of composting are:

- Reduces the weight to volume ratio
- Decreases carbon/nitrogen ratio (C:N)
- Kills weed seeds

The process of composting must maintain specific carbon and moisture parameters. This requires monitoring for specific temperatures and times to rotate compost. The process typically takes between 45 and 60 days for final product. Good compost is well decayed and stabilized. It has low soluble salts with a pH range between 5 and 8. The C: N ratio should be 15-25:1.

Jeff gave a brief overview of soils and the benefits of organic matter in the soil. The benefits of an organic soil are based around the food web within the soil. Good soil structure is a very dynamic system.

Jeff Leuzinger offered tours of the composting facility at Pearl Valley Organix to any MAGCS member. Just give him a call and he'd be happy to show you this interesting process.

The food web includes: bacteria, fungi, protozoa, arthropods and nematodes.

Bacteria: Decompose organic material. They convert energy into other forms. They assist in nutrient cycling, disease suppression, provide antibiotics and nitrogen fixation.

Fungi: These decomposers grow as long threads to stabilize soil structure.

Protozoa: Feed on bacteria and fungi. They regulate bacteria populations and assist in disease suppression.

Nematodes: Not much is known about these creatures and their role in the soil. They feed on plant parts, algae, bacteria, fungi and other nematodes. There are beneficial species. Not all nematodes are a problem for the turfgrass system.

Arthropods: These are "bugs" that feed on other life in the soil. They release nutrients as waste product.

Jeff ended his presentation by reminding us to pay attention to soil life. Balance is the key to healthy and productive soil and consequently healthy plants.