NATURE'S WAY RESOURCES
an organically based service company

www.natureswayresources.com

JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

Researchers at Nagoya University have discovered the clock genes in plants that control their circadian rhythm. For example, plants prepare for cold evenings by triggering biological processes such as closing their stomata and synthesizing waxes to prevent water loss. These genes produced in the evening are regulated by plant proteins produced in the morning.

The Plant Cell Journal, a paper in the Journal Ecology, has found that as biodiversity increases the resistance to plant diseases even when there are more pathogens present in the soil. They also found that artificial chemical fertilizers increased the disease load. *This is another reason to use organic fertilizers.*

Researchers at the Max Plant Institute for Plant Breeding Research in Cologne have found that the Thale Cress plant uses a fungus (Colletotrichum) which is normally a pathogen. The cress plant does not use mycorrhizal fungi to collect phhospurous (P) as most plants do. This fungus colonizes the plant roots and converts insoluble phosphate into soluble phosphate for the plants to use and does not infect the plant. However, if phosphate is plentiful (as from chemical fertilizers) then the plant launches a massive immune response and the fungus becomes a pathogen. Science Daily from the Journal Cell.

Another study from the University of Copenhagen has found that beneficial microbes produce plant hormones that protect plants from pathogens. It was found that bacteria produce cytokinin that allows the microbe to control plant diseases. Note: We add salt to food to preserve them as it kills bacteria. All artificial fertilizers are chemically salts.

Another paper from the American Society of Agronomy (ASA) states that homeowners should consider an organic approach to taking care of their lawns. They found that most grasses would do just fine with

no human help. When a homeowner applies chemicals, it often leads to unhealthy soil, fertilizer getting into watersheds and other side effects. Science Daily