WHERE WE ARE…..

THE GOOD NEWS IS farmers markets are burgeoning, local food is readily available through Community Supported Agriculture (CSA) and there is an upsurge of urban agriculture projects. Foodland Ontario produce is prominently showcased at our neighbourhood grocer.

THE BAD NEWS IS climate change is real. No longer being denied, governments grapple with measures to reduce greenhouse gas emissions (GHGE) while we are well into the era of peak oil where consumption demands outweigh production.

OUR SOIL WILL BE A SOURCE OF OUR RECOVERY

The connection between our food and our soil is evident, but we are now making a connection between our soil and climate change. Biochar, a soil improvement product which has the ability to capture carbon and sequester it in the earth for over 1000 years would be a useful tool in our fight to mitigate climate change. A recent study has estimated that 12% of current annual anthrogogenic GHGE could be reduced through the sustainable production and use of biochar: http://news.cornell.edu/stories/2010/08/biochar-could-mitigate-climate-change-study-shows Cornell Chronicle, Cornell University

BIOCHAR SOIL AMENDMENT TO ENHANCE CROP GROWTH AND MITIGATE CLIMATE CHANGE

Biochar is produced when biomass is heated in the near absence of oxygen (pyrolysis). The process is considered carbon neutral and when incorporated in soil is considered carbon negative. Used worldwide, it also suppresses methane derived from livestock and nitrous oxide derived from livestock and petro-chemical fertilizers, thus mitigating agricultural GHGE.

Other biochar attributes include the power to:-

- Enhance soil biology (up to 40% increase in mycorrhizal fungi)
- Increase soil organic matter
- Increase crop yields
- Improve water retention capacity of soils
- Improve nutrient retention in soils (up to 50% increase in cation exchange capacity)
- Remediate soils - agricultural, golf courses, quarries, landfills, urban trees, green roofs, soil and sod production, urban property management

The ability of biochar to retain moisture and replace peat moss in soil mixes would advance efforts to conserve our diminishing water resources and eliminate the need to destroy fragile ecosystems through peat extraction. Higher crop yields would give us greater local food security as soil health is restored. With less of a need for petrochemical fertilizers and pesticides, biochar would help shift us from a hydrocarbon toward a carbohydrate economy.

EARLY FIELD TRIAL RESULTS LOOK PROMISING

YREA has initiated biochar research field trials to gather scientific data in an effort to replicate in Ontario the positive results found worldwide. Our three year pilot project collaboration includes the University of Guelph to provide research expertise. Results from research data collected on the efficacy of biochar on Ontario soil will be made available for the benefit of all stakeholders.

YREA plans to subsequently establish a non-profit biochar production venture, making biochar locally available.