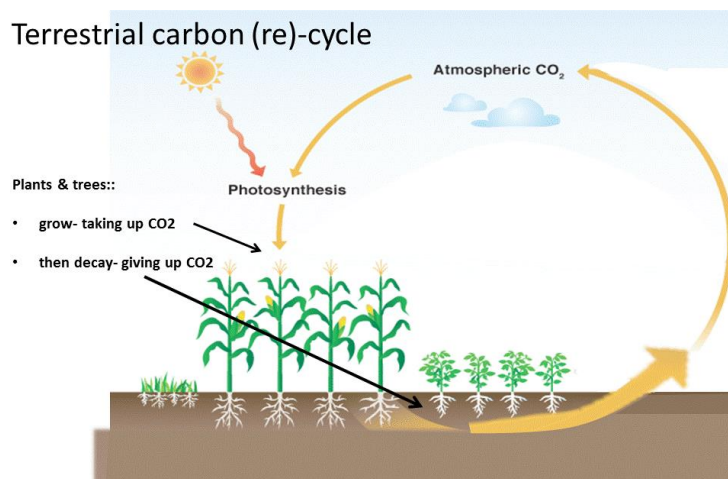


## Back to Your Roots Workshop

### Gillian Ward – One-Eighty Remediation

- Plants lose energy once it produces “babies”; the plant will give all of its nutrients to the babies for development and if the plant is not healthy it will go into a pre-diseased state
- Biological Production - Taking into consideration how the plants take in nutrients from soil and atmosphere (Amendments, tillage)
  - Healthy soil holds moisture like a sponge; absorbs rain fast, warms up quickly, stores moisture, breathes, digests. HOME FOR LIFE
  - Chemistry – understand base saturation, read soil tests carefully, use chemistry to structure soil
    - Well structures soil make up
      - 25% air
      - 25% water
      - 45% mineral particles
      - 5% Organic Matter consisting of: 10% Organisms, 10% Roots, 80% Humus
  - Carbon Cycle - Carbon, Oxygen, Hydrogen



- Microbes are needed in the soil in order for the plants to produce glucose
  - Essential for cellular respiration (growth and reproduction)

- Healthy plants are able to push nutrients down into the roots, could survive hail or devastating weather. If it has adequate energy the plants can recover
- Common Carbon & Nitrogen Ratio
  - Microbes barely exist – 8:1
  - Most chemical farms – 10:1
  - Microbes start reproducing – 16:1
  - Healthy Soil – 24:1
  - Biologically Active Soil – 30:1
  - High Quality Compost – 30:1
    - Low Carb / high nitrogen is hard on microbes
- Brix Meter
  - Measures how healthy the plant is by measuring the foliar glucose level
  - Available at Fieldstone Organics if anyone would like to try it
- Weeds
  - Can tell you a lot about your soil
  - Their job is to balance the soil (bring calcium back to aerobic zone)
- Why Biological?
  - Higher quality plants naturally defend against
    - Disease, weed pressure, drought, frost and insect
  - Look at your soil & growing environment, do you see lumps, crust/hardpan, erosion, water?
  - How deep is your aerobic zone (using compaction tester)
  - What weeds are most prolific
- Fall and spring programs are available to address issues contact:

Gillian Ward @ One-Eighty Remediation Inc. 1-306-292-6768