Content Information and Location

Creating CO_2 To Maximize Growing Systems

Section #1 Plant Dry Matter Content

- Summary section #1
- CO_2 is the most important
- Elements by weight percentage
- Plant dry matter sources
- Trace mineral percentage
- Photosynthesis breakdown
- Types of Carbohydrates in Plants
  - Monosaccharides
  - Disaccharides
  - Oligosaccharides
  - Polysaccharides
- Plant Metabolites
  - Primary
  - Secondary
- Molecular Formula
  - Amino Acids
  - Fatty Acids
- Cellular Respiration Breakdown

Section #2 Microbes are the biological gatekeepers to essential minerals

- Summary section #2
- Elements
- Can your plant access them
- Industrial agriculture
  - Major focus on NPK
  - What about the other 96% of the plant
  - Soil solubility

Section #3 NPK vs Biology

- Summary section #3
- Chemical fertilizers dimmish soil biology
  - Kills Beneficial microbes
  - Increase pathogens
- Microbiology fixation of CO_2
  - Essential plant elements & minerals

Content Information and Location

Creating CO_2 To Maximize Growing Systems

- **Section #4 Critical Importance of CO_2 to Mineral Ratios in Plant Growth and Function**
  - Summary section #4
  - NPK vs CO_2 – 600 bu corn
  - Importance of CO_2 in plant
  - Nutrient & CO_2 requirements for
    - Corn
    - Wheat
    - Soybeans
    - Alfalfa - Example
  - Microbial activity by season
- **Section #5 Seed Treatment**
  - Summary section #5
  - Seed Treatment
  - Solu-PLKS
  - Increased yield
    - Sunflowers
    - Wheat
    - Soybeans
    - Corn
    - Alfalfa
  - Mycorrhizal Fungi
  - KingFisher corn trial
- **Section #6 Power of Soil Microbes**
  - Summary section #6
  - Mineralization
  - Nutrient cycling
  - Microbe to plant nutrition
    - Solubilized mineral exchange
    - Predatory microbes
    - Plants consume microbes
  - Fungi & bacteria balance
- **Section #7 Microbial Mineral Tea**
  - Summary section #7
  - Making Tea
  - Brewer Examples

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Section #8 Soil Health & Food Nutrition Affect Human Health

- Summary section #8
- Investment Analogy
- Disease
  - Human dietary changes and metabolic disease
  - Soil degradation
  - Soil and Food inseparably connected
- Glyphosate
  - Patents
  - Human metabolism
  - Gut microflora
- What is Metabolic Syndrome?
  - Human disease timeline
  - Population breakdown

Section #9 Silent & Extremely Toxic Agricultural Radiation

- Summary section #9
- Current chemical plan is not sustainable
  - Global & United States fertilizer increases
    - Atomic cellular Damage
      - Total Global chemical usage
      - Total US chemical usage
      - Accumulated soil toxicity
- Glyphosate
  - Soil persistence
  - Residual example
  - Adjuvant toxins
  - Transfer to humans
- What now?
  - Return to biological systems
  - Be wise stewards