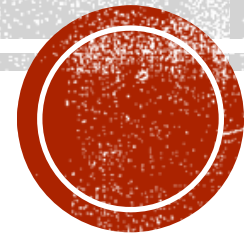


# **BECOMING BIOLOGICAL**

**A Natural Approach to Growing Nutrient Dense Food**



# THE FOUNDATION OF HEALTH

- Nutritional integrity of the food we eat
- Nutritional integrity of the soil in which it is grown.
- Dr. Arden Andersen, Real Medicine Real Health 2004



# NUTRITIONAL INTEGRITY CHECK UP

- USDA tracks changes in nutrient value of foods, 1950 - present
- Concerns have been raised since the 1980's about the decline in nutrition levels (5-75% in various minerals)
- Originally thought to be linked to mineral depletion of soils



# NUTRIENT DECLINE THEORIES

- studies note inverse correlation between yield and nutrition value: “dilution effect”
- are seed genetics to blame?  
”commercial cultivation of seed has traded nutrient density for yield, pest resistance, and transportability...”

American College of Nutrition,

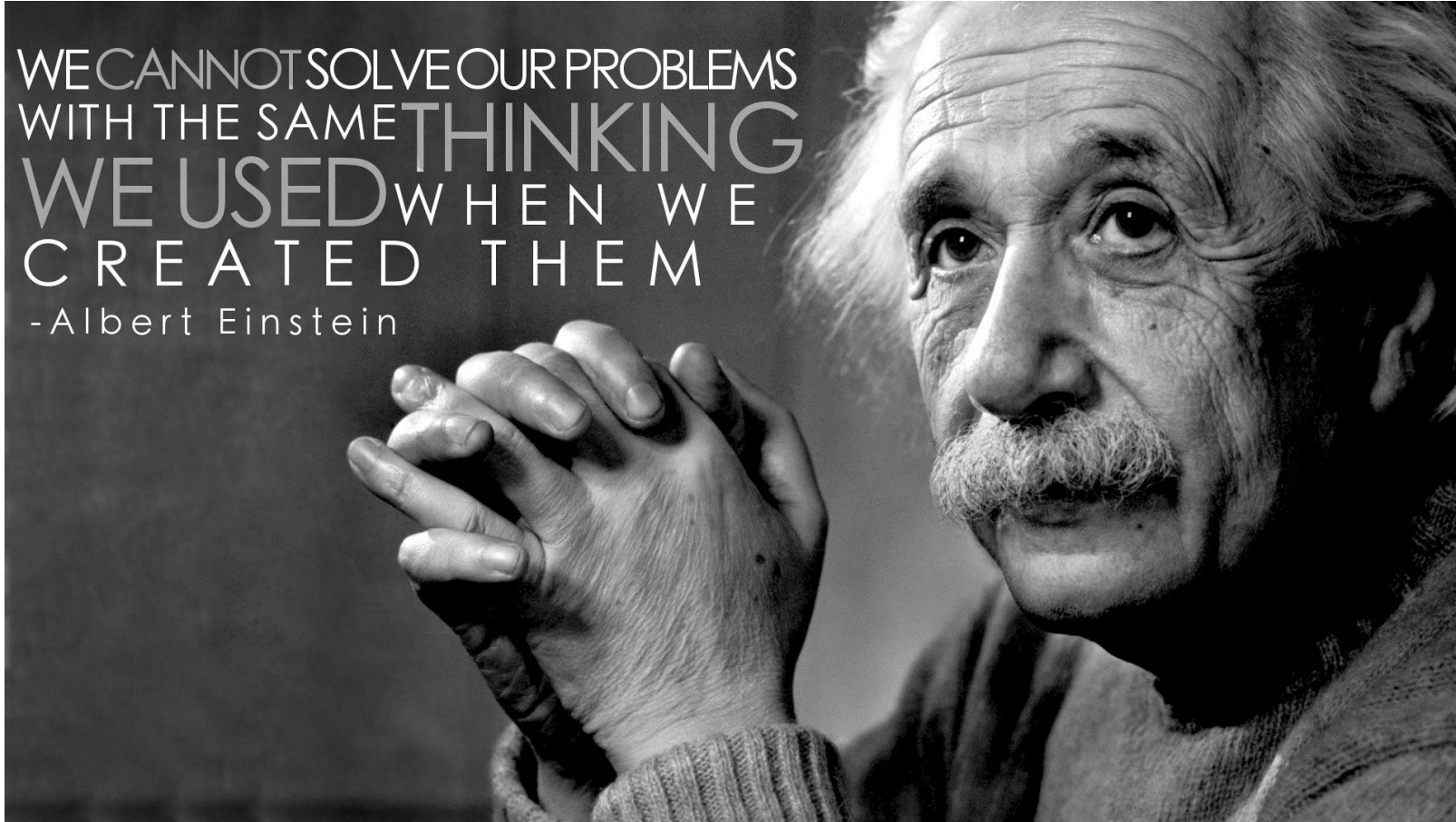


# NUTRITIONAL VALUE OF ORGANIC FOOD

- According to the US National Library of Medicine, National Institutes of Health
- “there is no evidence of a difference in nutrient quality between organically and conventionally produced foodstuffs.”
- Dangour, Dodia et al, 2009 American Journal of Clinical Medicine



WE CANNOT SOLVE OUR PROBLEMS  
WITH THE SAME THINKING  
WE USED WHEN WE  
CREATED THEM  
- Albert Einstein



# BECOMING BIOLOGICAL

- Production system **in support of life:**
  - Microbial life in the soil
  - Addresses carbon cycle
  - increasing nutrient density of food
  - Support for the health of human and livestock



# WHAT IS BIOLOGICAL PRODUCTION?

- A natural way to amend the growing environment and support crop fertility
- Defined benchmarks and goals, assessment tools
- Organic certified amendments
- Intelligent tillage
- Focus on quality, nutrient dense product





# WHY BIOLOGICAL?

Process of growing higher yield with higher quality

Higher quality plants naturally defend against

- disease, weeds pressure, drought, frost and insects
- All within parameters for organic production.



# HOW DOES ONE BECOME BIOLOGICAL?

- A field sprayer and mix tank are necessary tools to feed the crop and treat the soil with organic certified mineral and biological amendments in season.
- Define production and quality goals
- Establish your starting point
- Monitor changes and progress with tools



# WHERE DOES ONE BEGIN?

- Look at your soil, your growing environment:  
Lumps? Crust/hardpan? Erosion? Water? Salts?
- How deep is your aerobic zone?
- What kind of weeds are most prolific?
- Is the crop residue breaking down or being preserved?
- Consult the resources, use the assessment tools



# FALL PROGRAM — SOIL STRUCTURE

- Soil structure is addressed during the dormant season
- Use of specific minerals to either relax the soil (flocculate) or to provide aggregation of dispersed, eroding soils
- Flocculate the crusted, cracked, hardpan soil for air and moisture retention
- Remineralize the soil with all the trace minerals, ancient sea bed source, complete and clean
- Reintroduce a diverse population of soil microbes
- Support the soil microbiome with a ready food source
- Address the carbon needs of the soil with humates



# **SPRING PROGRAM — CROP FERTILITY**

- Apply specific elements to support healthy crop growth, starting with seed treatment for healthy root growth
- Prepare the seed bed with specific minerals and diverse microbes to support early growth and development of root, leaf and stem



# IN-CROP ENERGY APPLICATIONS

- Use a high clearance sprayer to feed the crop, especially around the time of seed production
- Monitor with assessment tools, electrical conductivity and brix levels
- Be sure the crop has adequate energy to fill pods, seed heads



# **ENERGY . . .**

## **VITAL FOR GROWTH OF HEALTHY CROPS**

- minerals exchanging electrons in the soil
- Microbial activity
- Solar energy
- Magnetic field
- Monitor the flow of energy available to plants through the growing season
- Apply foliar feed as necessary to boost energy in crop



# WHERE TO GO FROM HERE

- One-Eighty Remediation Inc. provides workshops, mentoring, farm visits, field walks in BC 1 306 292 6768
- Seek out local suppliers of necessary components for implementation of your program
- Start where you are at, and move in the direction of your production goals





# BECOMING BIOLOGICAL

- Other activities in support of life, through One-Eighty Remediation Inc. partners:
  - Waste Water Treatment – Membrane BioReactor Technology
  - Fresh Water Remediation
  - Probiotic Cleaning products
  - Horse Health/Hoof Care

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