Historical Trends in U.S. Organic Agriculture

Matt Grieshop PhD
Michigan State University
Department of Entomology
History in Four Phases:

- Initial Development
- Polarization
- Transition: Recognition
- Accommodation/Commodification
The Past

GENERAL PURPOSE
20-10-20
(For Continuous Liquid Feed Programs)
Guaranteed Analysis

Total nitrogen (N) ........................................... 20%
7.77% ammoniacal nitrogen .................................
12.23% nitrate nitrogen ..................................
Available phosphate (P2O5) .................................. 10%
Soluble potash (K2O) ........................................ 20%
Magnesium (Mg) (Total) .................................... 0.05%
0.05% Water Soluble Magnesium (Mg) .................
Boron (B) ....................................................... 0.0068%
Copper (Cu) .................................................... 0.0036%
0.0036% Chelated Copper (Cu) ...........................
Iron (Fe) ....................................................... 0.05%
0.05% Chelated Iron (Fe) .................................
Manganese (Mn) .............................................. 0.025%
0.025% Chelated Manganese (Mn) .......................
Molybdenum (Mo) ........................................... 0.0009%
Zinc (Zn) ...................................................... 0.025%
0.0025% Chelated Zinc (Zn) .............................

Derived from: ammonium nitrate, potassium phosphate, potassium nitrate, magnesium sulfate, borax, copper EDTA, manganese EDTA, iron EDTA, zinc EDTA, sodium molybdate. Potential acidity: 487 lbs. calcium carbonate equivalent per ton.
Sir Albert Howard

Indian Composting Pit

The Soil and Health

Monday, September 14, 2009
Sir Howard's Philosophy

“The Law of Return”

Mycorrhizal Hyphae on Plant Roots

Monday, September 14, 2009
East vs. West

a) early agriculture
b) urbanizing society (mid 19th to mid 20th century)
c) industrial agriculture (mid- to late 20th century)
Walter Northbourne's "Organic Farming"

R. Steiner

Agriculture Course
The Birth of the Biodynamic Method
1924

Lord Northbourne

Look to the Land
1940

Monday, September 14, 2009
Sir Howard’s Proteges

Lady Eve Balfour

J.I. Rodale

Monday, September 14, 2009
Lady Eve Balfour

1898-1990

Courtey of The Soil Association

International Federation of Organic Agriculture Movements

Soil Association
Founded in 1947 with proceeds from J.I. Rodales Publishing Business
Warfare Speech in Organic

- The war in the soil: Sir Howard
- The organic front: J.I. Rodale
- Figures like Sir Howard and Rodale went offensive
- Facilitated marginalization of organics
- Howard and Rodale characterized as "Grim Prophets"
Organic Reawakening
1972 founding of IFOAM

International Federation of Organic Agriculture Movements

Versailles France

1977 Keynote speech by E. Balfour: “Towards a Sustainable Agriculture”

Continued involvement in Standards development

Monday, September 14, 2009
IFOAM.org Definition:

**Organic agriculture** is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.
Organic Certification:

And Others Followed...
1980: Report and Recommendation on Organic Farming

USDA scientist: Robert Papendick

Reagan takes office in 1981

Earl Butz statement: "Millions would starve if all farmers adopted Organic methods"
Organic NGO’s

- Founded in 1985
- Founded in 1987

Monday, September 14, 2009
Accommodation: Commodification

- 1990: Organic Foods Production Act
- 10 years of study/debate
- Sewage/GMO's/Irradiation become issues....

Monday, September 14, 2009
2002 USDA standards
The National Organic Program

NOSB: National Organic Standards Board: 15 member board
Farmers, processors, scientists, and NGOs
2002 National standards take effect
Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony.

Organic is a labeling term that denotes products produced under the authority of the Organic Foods Production Act. The principal guidelines for organic production are to use materials and practices that enhance the ecological balance of natural systems and that integrate the parts of the farming system into an ecological whole.

Organic agriculture practices cannot ensure that products are completely free of residues; however, methods are used to minimize pollution from air, soil and water.

Organic food handlers, processors and retailers adhere to standards that maintain the integrity of organic agricultural products. The primary goal of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals and people.
The Present

And many more...

Monday, September 14, 2009
Meanwhile: 20%/yr Growth in Organics

The U.S. organic food industry grew by 16.2 percent in 2005 to account for $13.8 billion in consumer sales. Here is a look at the rate of growth in the organic food industry. (Percentage of total market in gray.)

Sources: Organic Trade Association Annual Survey; Nutrition Business Journal surveys of manufacturers
2007 meta study conducted at UM

Reviewed 20 years of side by side comparisons of organic vs conventional agriculture

Model suggests that in the developed world OA produces ~90% what CA produces

In developing countries OA produces ~140% more than present practices

Net results indicate enhanced food production

Badgleya et al. 2007 Renewable Agriculture and Food Systems 22: 86-108
Local Vs. Organic and Alternative Certification

Monday, September 14, 2009
Processing Standards

1. "100% Organic"
   Means all ingredients are organic. The USDA Organic logo may be used on the packaging.

2. "Organic"
   Means a minimum of 95% of ingredients are organic. The package may include the USDA Organic logo.

3. "Made with organic ingredients"
   70% to 94% of the product is organic. USDA logo cannot be used.

4. Ingredient panel only
   Means the food has less than 70% organic ingredients. "Organic" can only be used on the ingredient panel.
"Organic" Beer?

As British beer writer Roger Protz says in his Organic Beer Guide: “Drink organic, think organic, and let us live in harmony with nature.” The question is: what is organic beer?
Organic Dairy

Cornucopia Institute Report

Complaints filed in 2005

Horizon in MD, ID

Aurora in CO, TX

Thousands of head per ranch

Animals rarely pastured

Monday, September 14, 2009
Organic Dairies: Aurora

Fantasy:

Woodstock Farms was created to honor the inseparable relationship between the vitality of the soil, the energy of the plants and the viability of farming. The quality of our food is important to us. That is why our farmers are dedicated to using traditional organic farming techniques, without the use of synthetic pesticides or antibiotics. We know who grows our food. Our products come from farmers who share in our vision for a thinking agricultural future, an environment that is safe for our children and for food that is grown with reverence for the land. Our farmers, her harvest and your well being are the heart and soul of our commitment to you and to our place on earth. We invite you to be a part of our family, as you allow us to be a part of yours.
Organic Dairies: Aurora

Reality:
Organic Dairies: Aurora

Reality:
Organic Dairies: Aurora

Reality: