

Alternative Agriculture

Michael Bomford, PhD

Kentucky Academy of Science
Meeting, November 2007

Organic agriculture


- Shift from marginalized to mainstream
 - “We can go back to organic farming if we must – we know how to do it. However, before we move in that direction we must decide which 50 million of our people will starve
 - Earl Butz, US Secretary of Agriculture, 1971
 - “In recent years there has grown up in this country a cult of misguided people who call themselves "organic farmers" [...] These so-called organic farmers preach a strange, two-pronged doctrine compounded mainly of pure superstition and myth, with just enough half-truth, pseudo science and emotion thrown in to make their statements sound plausible to the uninformed.”
 - Ray I. Throckmorton, Kansas State University Dean of Agriculture, c. 1945

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July 10, 2007

Organic farming can feed the world, U-M study shows

Español

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ANN ARBOR, Mich.—Organic farming can yield up to three times as much food on individual farms in developing countries, as low-intensive

methods on the same land—according to new findings which refute the long-standing claim that organic farming methods cannot produce enough food to feed the global population.

Researchers from the University of Michigan found that in developed countries, yields were almost equal on organic and conventional farms. In developing countries, food production could double or triple using organic methods, said Ivette Perfecto, professor at U-M's School of Natural Resources and Environment, and one the study's principal investigators. Catherine Badgley, research scientist in the Museum of Paleontology, is a co-author of the paper along with several current and former graduate and undergraduate students from U-M.

Challenges and Information Needs for Organic Production in Kansas

Research Report¹



Gerad Middendorf, Ph. D.

Department of Sociology, Anthropology and Social Work

Kansas State University

July, 2006

Organic

- Emphasis on soil life
- Resource cycling, Biodiversity, Ecological balance
- Connection to human health... controversial!
- Systems research, farmer participatory research
- Key disseminators:
 - Albert Howard, J.I. Rodale, Eve Balfour, Charles Benbrook
 - *Organic Farming and Gardening* (OG) magazine, USDA National Organic Program
- Rapid shift from alternative to accepted
- Considerable peer-reviewed research by mainstream scientific institutions

Eco-agriculture

- Emphasis on energy
- Nutrient ratios, low-frequency forces, paramagnetism
- Connection between plant health and pest resistance; emphasis on farm health and profitability
- Conventional science is a lost cause; independence from mainstream researchers prized
- Key disseminators:
 - Charles Walters, William Albrecht, Gary Zimmer, Neal Kinsey, William Reich, Carey Reams... (largely ag. consultants and maverick medical doctors)
 - *Acres USA*

Biodynamic

- Predictable natural (“spiritual”) forces guide physical world
- Emphasis on soil life, cosmic influences/rhythms, astronomical calendars, biodynamic preparations
- “Unbiased reading of the phenomena and clearly designed experiments”
- Some peer-reviewed pubs in mainstream journals and credentialed scientists... “like driving a tractor naked.”
- Key disseminators:
 - Rudolf Steiner, Ehrenfried Pfeiffer, John Jeavons
 - *Biodynamics* (journal), Demeter Assoc, Biodynamic Farming and Gardening Assoc., Josephine Porter Institute, Michael Fields Institute