

## Letters and Scientific Communications

### **Wild Farm Alliance's Farm Biodiversity Conference and The 25th Annual Ecological Farming Conference - "Shining light on Sustainable Agriculture": A Summary**

One thousand five hundred people gathered in Asilomar, CA between January 19-22, 2005 to hear, talk, and learn about eco-friendly farming. Farmers, scientists, students, extension workers, policy makers and other 'eternal learners' were present. The Wild Farm Alliance hosted their event immediately prior to the Eco-Farm Conference, which was conducted by the Ecological Farming Association. The Eco Farm conference marked the 25<sup>th</sup> year celebration of sustainable agriculture and provided the arena to explore, debate, and network together to revitalize the agriculture and conservation vision and spirit.

The idea of a biotic farm was proposed by Aldo Leopold in the 1940s. Farm Biodiversity conference speakers such as Fred Kirschenmann, Dan Imhoff, Eliot Coleman, and Sara Vickerman brought attention to the challenges in agriculture (among others, fossil fuel depletion, environmental degradation, climate change, bankrupt farm economy), talked about Organics and the biotic community, and discussed what agricultural landscapes can provide in terms of habitat (wetlands, potholes, coastal estuaries, riparian floodplain, prairies, shrub steppe, low elevation savannas, oak woodlands, etc.). Jim Riddle<sup>1</sup> introduced and talked about several terms and rules in setting Organic standards for production and produce. He pointed to some of the redundancies, loopholes, and subsidies that work cross-purposes.

With an ongoing increase in the price of fossil fuels and the desire for ecological sustainability, it was appropriate that the Eco Farm conference had some presentations<sup>2</sup> on alternative energy strategies that have made it to the farm (e.g. anaerobic bacteria digesters, solar hot water systems, and grid solar electricity systems). Basic principles of operation of on-grid and off-grid solar power systems, solar sighting, system sizing, equipment selection, installation, and maintenance, state rebates, tax credits, etc. were also discussed.

The problems encountered with the delivery of fresh, seasonal produce in the school lunch program (bureaucratic, logistical, and cultural) were also discussed. Two veterinarians and a farmer shared their decades of experience connecting animal health, strong immune systems, homeopathic medicine, tinctures, and cow psychology. Research and

extension entomologists from Oregon State University shared their knowledge on insect life-cycles of common vegetable pests, their biology, natural enemies, integrated management, monitoring techniques, establishing thresholds, and responsible use of Organic pesticides.

Autar Matoo, an USDA Agricultural Research Service scientist and Larry Phelan from Ohio State University Agriculture Research Center, shared their research that scientifically confirmed farmers' observations of plant resistance to pests on Organic farms. Their experiments demonstrated that sustainable soil management promotes higher levels of proteins that boost plants immune defenses, enhance longevity, and that healthy soils build plants' ability to buffer moisture and nutrient balance ('biological buffering'), leading to pest resistance.

Software and computer technology were not left behind. The Rodale Institute discussed software designed for the comparison of Organic and conventional system profitability. This software would also allow an Organic farmer to change variables in Organic systems to tweak production and increase efficiency and profits.

Presentations also suggested strategies to stop genetic engineering in agriculture. In 2004, three CA counties and one city passed bans on the production of Genetically Engineered (GE) crops and animals within their boundaries. Coalitions of citizen groups, farmers, and local communities made this possible. County leaders shared information about their campaigns, organizing techniques, and strategies.

The dissatisfaction among consumers of information available on food and ethical issues (i.e. local environment, living wages, humane treatment of animals, and scale of operations) were addressed in detail. Talks also addressed the concerns of certifiers, seed companies, and growers on 'equivalent varieties' and acceptable seed varieties, tools and strategies for non-chemical weed management in vegetable cropping systems, branding and marketing of wines made from Organic grapes, social justice and economic equity in our food systems and promoting good labor practices on the farm.

Citrus growers and marketers shared information about varieties, weed control, pests, post harvest handling, and marketing. Sessions featured both farmers and apprentices speaking about their experiences, reflections, and needs. Dr. Mitchell, whose 2003 paper reported higher 'total phenolics' in organically grown foods talked about antioxidants and nutritional quality of Organic foods. Terra Madre delegates and Slow Food USA leaders shared their experience in agricultural stewardship, collaborative relationships, and their commitment to usher

<sup>1</sup> Chair, National Organics Standards Board (NOSB)

<sup>2</sup> presented by Steve Decater, Liver Power Farm; Scott Mattheisson, Laguna Farm; Albert Straus, Straus Family Creamery.

sustainability in growing and eating food. A workshop highlighted several horticultural therapy projects for people with disabilities. There were seed swap discussions focused on critical Organic breeding needs and identifying priority traits for improvement.

New ideas in community supported agriculture, protecting Organic standards, increasing farm income, research results on nutrient cycling, nitrogen availability in Organic crops, farming practices that conserve nutrients, and best management practices at Organic farms were also discussed. Topics included cover cropping, compost/fertilization, cutting edge strategies for farmers, tax reduction, lawsuit protection, estate planning, livestock integration, and production of medicinal herbs, among others.

Strategic CA advocacy for the 2007 Farm Bill was also discussed along with tools for the small producer, the sustainable agriculture movement in urban communities, the latest in biodynamic farming, ecological greenhouse design, and tunnel growing. Participants also learned about the Organic revolution in the United Kingdom from two English farmers.

Two noted researchers and journalists, Sandra Stiengraber and Michael Pollan, presented illuminating discussions on the path of agricultural chemicals trespassing into a mother's body and on what has gone wrong with the industrial food system and how we might begin to fix it.

Some speakers were concerned about the industrializing/globalizing of Organic agriculture, and how Organic farming rarely met the ideal of "farming in nature's image"<sup>3</sup>. On-farm habitats can provide essential links to help support wild nature while attracting beneficial insects, protecting water quality, and reducing need for pesticides. This factor takes Organic farming a step further towards bringing farming and wildlife conservation together. The National Organic Program Rule actually requires farmers to conserve biodiversity and maintain and improve natural resources.

Some workshops were geared towards biodiversity conservation on farmlands. The workshop conducted by Clair Kremen<sup>4</sup>, Robin Thorp<sup>5</sup> and Mace Vaughan<sup>6</sup> shared the latest results of research on crop pollination by native bees, provided information on identification of native bees and their specific habitat needs, and introduced tools for assessing the contribution of these bees and steps to ensure native pollinators continue to provide their valuable service.

The Central Coast Regional Water Quality Control Board discussed requirements for irrigated agriculture

operations to meet new water quality regulations. Clean water and land-sea connections were discussed along with the history, requirements, and latest status on Conditional Waivers in the Central Coast and elsewhere in CA. Charlie Rominger, an experienced organic farmer and one of the many featured in the book by Dan Imhoff<sup>7</sup>, talked about his experience in establishing vegetated tail water ponds to collect agricultural runoff as cost effective flood control that conserves water, staggers irrigation, and supports Coho salmon recovery.

Hedgerows and grassed waterways are increasingly being planted on farms and have multiple valuable functions. They serve as habitat for beneficial insects and other wildlife and are buffers from pesticide drift, noise, odors, and dust. They provide erosion protection, stabilize waterways, increase water infiltration, and reduce non-point source pollution. They also act as windbreaks, shelterbelts, provide an aesthetic resource, and increase biodiversity. Several presenters discussed issues of farmscaping, techniques concerning hedgerows, and the cost of establishment, planting and maintaining them.

Louise Jackson from UC Davis, talked about the need to understand the services provided by biodiversity and the importance of providing agricultural sustainability via biodiversity conservation.

The conference also included two field trips. One was to visit with Monarch butterflies in their over-wintering sites (lead by the Xerces society). The second was a visit to Triple M Ranch and Elkhorn Slough, both placed in Monterey Bay area. Conference attendees were also treated to a movie titled 'The Real Dirt on Farmer John', a tale of a maverick Midwestern farmer, who was castigated for his efforts to transform his farm to an Organic operation.

It was heartening to see farmers and their families come on stage to speak about how they have worked together towards sustainability and social justice. These are people who have understood that 'Human economics should base[d] on nature'<sup>8</sup> and 'if agriculture is to remain productive, then it must preserve the fertility and ecological health'<sup>9</sup> thus making conservation an essential part of farming. The conferences left me with a sense of awe for the people who are working to make farming ecologically sound, socially justified, and spiritually fulfilling. I returned home a more educated person, with deeper respect to the farmers, researchers, and other individuals working towards a tomorrow that might be better for our children.

**Neeraja Havaligi**, Pleasanton, CA



<sup>3</sup> Soule and Piper 1992

<sup>4</sup> Princeton University

<sup>5</sup> UC, Davies

<sup>6</sup> Xerces Society

<sup>7</sup> Farming with the Wild, by Dan Imhoff.

<sup>8</sup> Paul Hawkins

<sup>9</sup> Wendell Berry