A one in 75 years storm, according to our new Exhibit Coordinator, Nancy Brunelle, was probably the “hottest” news of the 26th Annual NOFA Summer Conference. It came Friday night with a vengeance and dropped somewhere between 3 and 5 inches of rain on the conference. We moved the contradance and get acquainted party to the Crown Center and then Hampshire was gracious enough to allow our campers to move in to sleep the night. Some damage came to the exhibits in the tents as the canvas was unable to keep the torrential rain out.

Eliot Coleman was a real hit as keynoter, as was his and Barbara Damrosch’s workshop on their winter farming operation the next day. Eliot spoke about many things that are “wrong” in our world, and questioned the direction of an organic agribusiness model, along with a world where we lose track of our local roots and our local farms. I felt he was most eloquent on the issue of trusting our land to provide us with good health and vitality and wholesome food if we only get to know it intimately and work with it. Eliot has an insatiable curiosity about natural systems, appropriate technologies and the ways of nature. With 35 years of farming experience, he has honed small farming techniques to an absolute science. Looking at the slides of their winter greenhouse operation it was clear how much care and thoughtfulness goes into every aspect of their farming system.

As coordinators, Jack and I get a special treat of spending extra time with our keynoters during the conference weekend. Barbara and Eliot, as Jack puts it, “don’t suffer fools easily.” Their no nonsense approach coupled with a real devotion to the land and to their local community made them really refreshing folks to host at this year’s conference. Eliot’s stimulating and inspirational speech was among the best that we have heard at recent NOFA conferences. We hope to print a transcript of his speech in the Winter issue of the Natural Farmer. (Anyone who could not attend Eliot’s keynote talk or the slide show he and Barbara gave on their movable greenhouse winter harvest system can get a videotape of either for $15 from the NOFA Video Project at this address.)

The staff skit is Jack’s pride and joy. I felt it was one of his best this year. Not only did he aptly and succinctly take pot shots at almost all of us and our eating habits and inconsistencies, but we finally figured out the microphone situation adequately so that almost all the lines could be heard.

We will probably keep the get acquainted party and the contradance in the Crown Center. Not quite the same atmosphere as the Red Barn, but very convenient after the keynote address to bring the party to the people. And maybe next year we will be able to do a little stargazing with Stan Ingram.

It seemed that the workshop room situation was a little crazier than usual this year. Perhaps it was the addition of 50 more workshops over last year that seemed to burst the seams, and Hampshire’s late revelation that 3 of our normal rooms had been converted into other spaces. We could have had better signage for you all, and I apologize for not doing that better. I heard generally marvelous comments about the content of the workshops, however, and can never even begin to thank the 172 presenters for their wealth of knowledge and shared information.

The “Can Local Agriculture Feed the World” debate was able to happen finally when Al Johnson, long time NOFA member and Sean Clark from Berea, KY stepped up to take the con side at the last minute. They ably challenged Terry Gips and Rod Frenz to defend their belief in the productive and nutritional capacities of local and organic agriculture.

Thanks again to Richard Murphy who arranged a fine set of films, the debate, the contradance, (continued on page 27)
Advertise in The Natural Farmer

Advertisements not only bring in TNF revenue, which means less must come from membership dues, they also make a paper interesting and helpful to those looking for specific goods or services. We carry 2 kinds of ads:

The NOFA Exchange - this is a free bulletin board service for NOFA members and TNF subscribers. Send in up to 100 words (business or personal) and we'll print it free in the next issue. Include a price (if selling) and an address or phone number so readers can contact you directly. If you're not a NOFA member, you can still send in an ad - just send $5 along too! Send NOFA Exchange ads directly to The Natural Farmer, 41 Sheldon Rd., Barre, MA 01005 or (preferably) E-mail to JACKKITT@AOL.COM

Display Ads - this is for those offering products or services on a regular basis, and you want to make direct con- taction with display ads. Send camera ready copy to Justine Johnson, 145 LaPlante Circle, Easthampton, MA 01027 and enclose a check for the appropriate size. The even more attractive double size is $45, or $65 for $7/8" wide, or $85 for $1 1/2" wide. The size you order must be paid in full in advance.

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Frequency discounts: if you buy space in several issues you can qualify for substantial discounts off these rates. Pay for two consecutive issues and get 10% off each, pay for 3 and get 20% off, or pay for 4 and get 25% off. An ad in the NOFA Summer Conference Program Book counts as a TNF ad for purposes of this discount.

Deadlines: We should receive your ad copy one month before the publication date of each issue. The deadlines are:
January 31 for the Spring issue
April 30 for the Summer issue
July 31 for the Fall issue
October 31 for the Winter issue

Contact for Display Ads: Send display ads with payment to our advertising manager, Justine Johnson at 145 LaPlante Circle, Easthampton, MA 01027. If you have questions, or want to reserve space, call us at (413) 977-7007 or JSL145@aol.com.

Disclaimer: The Natural Farmer cannot investigate the claims of advertisers and we don’t vouch for anything advertised here. Readers are expected to exercise due caution when inquiring about any product or service. Different NOFA chapters have different standards for fertilizers, for instance, and a product acceptable in one state may be prohibited in another. Please check with your chapter when in doubt. Remember, however, that advertisers are helping support the paper and, when appropriate, please support them.
Let us thank these Friends of Organic Farming who have generously supported
Garlic Seedstock

soft and hardneck varieties, extremely hardy, performing well throughout the northeast, certified NOFA-NY. $5.50 lb + shipping, discount on quantities. Doug Bowne, 345 Lynch Rd, Little Falls, NY 13365. (315)866-1403, email: EMOW@intcenter.com Want to farm, but lack the capital to start? We have more agriculture resources than are being used, and will assist individual/ couples with entrepreneurial spirit start. Farm is certified by NOFA-NY, soils excellent, numerous markets. Doug Bowne, 345 Lynch Rd, Little Falls, NY 13365. email: EMOW@intcenter.com, (315)866-1403

Ideal tenant/caretaker-type seeks long term living situation.

I am a mature, quiet, responsible, non-smoking, employed, 30+ years of significant organic vegetable and perrenial gardening experience, interior/exterior and moderate home repair skills, No four-footed pets, and excellent references. I am seeking a quiet, private place to live in exchange for either modest/reduced rent for excepional care and maintenance or a live-on caretaker position (part-time, flexible hours). Within 20 mile radius of Northampton, MA. Please contact Leslie Hoffman, P.O. Box 139, Amherst, MA 01004. E-mail: lesle.hoffman@the-spa.com. Phone: 413-467-3666. Request good through May, 2001.

Farmer Wanted:

Experienced in organic vegetable production. Position and compensation dependant on level of experience. Year round position. 40 acres certified vegetables and berries, apples. Farmstand. Contact John at Hutchins Farm. 754 Manitou St., Concord, MA 01742. 978-369-5041, hutchfarm@earthlink.net

Internships available for Fall 2000 and Spring 2001 at Holcomb Farm CSA, West Granby CT.

Interns participate in all aspects of vegetable production and distribution on a 16 acre CSA farm. The CSA serves households and social service organizations in the greater Hartford area, and also provides on farm experience for at-risk youth. Compensation: $600/month, fresh vegetables, and assistance with housing. Send resume and letter to Paul Bucciglio, Holcomb Farm CSA, 111 Simsbury Rd., West Granby CT 06090. Phone (860) 653-5554, email csamanager@hartfordfood.org

Buffalo Organics, a 4 year old member CSA, needs a farmer to assume management or ownership responsibilities. Equipment is available for lease or purchase. Business includes two prime farmers markets, an excellent location, and close proximity to Buffalo and suburbs. Housing is available on the farm. Terms negotiable. CSA brochure at WWW.buffalo-organics.com. Contact Stewart Ritchie at buffalocsa@hotmail or (716) 679-5718. sunpit@mediaone.net Phone: 413-467-3666. Request good through May, 2001.

positions for 2001 season

Asst. Farm Manager - share responsibility for management of 18 acre farm and CSA. Field planning, seed selection, greenhouse and planting schedules. Field work and tractor experience necessary. Need good communication skills, work with a diverse member. Living space, farm vegetables, workman’s comp and salary. Apprenticeship: Must work long hours, will be involved in all aspects of the farm operation. Private room, farm vegetables and board, and a stipend is offered. We recommend a position (part-time, flexible hours). Within 20 mile radius of Northampton, MA. Please contact Leslie Hoffman, P.O. Box 139, Amherst, MA 01004. E-mail: lesle.hoffman@the-spa.com. Phone: 413-467-3666. Request good through May, 2001.

farmer wanted: Seeking winter in southern Oregon. Program runs mid-March thru June. Work involves cultivation and harvest of organic vegetable and herbal components. Must be prepared for hard work. No monetary fee. Communal housing provided. To receive an application form, write to: Mona Llloyd, Herb Pharm P.O. Box 116, Williams, OR 97544. Deadline to apply Feb 1, 2001. Acceptance decisions start on Dec 1, 2000. For more info. Call (541) 846-9121 or Email workstudy@herb-pharm.com.
Reports by chapter representatives at the Interstate Council meeting on August 13 indicate that different NOFA states are taking different approaches to meeting the accreditation requirements of the federal organic certification regulations.

Connecticut expects to drop out of certification and let the state government take over, much as Rhode Island and New Hampshire currently do.

Massachusetts is evaluating the question at an upcoming meeting between board and certification committee representatives. The discussion will focus on how much remaining as a certifier will cost the organization, whether current volunteer help can be expected to continue under the new program, and what are the possibilities of a private/public hybrid program.

New Hampshire will continue with the current state government program.

New Jersey will stay as a private certifier for their Pennsylvania customers, but will work as an agent of the state government to certify its New Jersey farmers. The legislature is appropriating funds to facilitate this changeover and help NOFA meet the costs of qualifying under the NOP.

New York will stay as a private, fee-based program under the NOP. The chapter expects all the certification and accreditation costs to be fully funded by fees.

Rhode Island will continue with the current state government program.

Vermont will stay as a private, fee-based program under the NOP. They are talking of adopting and certifying to higher standards than the minimum required by the NOP. The chapter expects all the certification and accreditation costs to be fully funded by fees, although it is possible the state may help with some of the accreditation costs.
NOFA-VT offers organic dairy technical assistance. Under an ongoing program, NOFA-VT offers grants of up to $200 to assist farmers in becoming organic milk producers, as well as conferences, workshops, publications and precertification visits to help farms making the organic transition. For more information, contact NOFA-VT at PO Box 697, Richmond, VT 05477, (802) 434-4122, or nofavi@together.net. source: NOFA-VT press release

$10 million for transition to organic. The Agricultural Risk Protection Act of 2000 has authorized $10 million annually in Commodity Credit Corporation (CCC) funds for cost share assistance to help farmers with conservation and sustainable agriculture-related practices such as making the transition to organic production. The total payments to any person in one year may not exceed $50,000. By funding the program through the CCC, the act avoids an annual appropriation process in Congress. source: In Good Tilth, Vol, No. 1

Federal crop insurance now possible for organic producers. The Agricultural Risk Protection Act of 2000 has codified organic farming as “good farming practice”, thus opening the way for organic producers to participate in the federal crop insurance program. Previously, a farmer’s failure to use chemical fertilizers and pesticides gave insurance companies an acceptable excuse for not covering losses to those crops. The USDA still has not collected data to develop actuarial tables for organic crops, so implementation of the act may take years. source: Northern Plains Sustainable Agriculture Society Newsletter, July, 2000

Negative report on organic foods retreated. The Feb. 4, ABC News “20/20” segment, hosted by correspondent John Stossel, that made the case that organic food is not necessarily healthier than conventional food — and might actually be dangerous because organic food is grown in manure and hosts pathogenic vesicles — has been partially retracted. The network said that research it claimed had shown such results was in fact never conducted. It blamed the mistake on David Fitzpatrick, a show producer. The error was brought to light during a follow-up investigation by the Environmental Working Group. source: The New York Times, August 8, 2000

Simple test devised for GM grain. The Brazilian Agriculture Ministry’s research arm, Embrapa, said exporters of Brazil’s soybeans have developed a simple method to prove to discerning buyers that their soybeans are free of genetically modified (GM) herbicide resistance. Soybeans are placed in paper towels moistened with a diluted solution of the herbicide being tested for. “Once the beans germinate in the diluted solution, the transgenic seeds will have normal root development but the conventional soybeans will not develop any roots,” Embrapa researchers said. source: Internet news, May 29, 2000

EPA finds Dursham more dangerous than previously thought. The US Environmental Protection Agency (EPA) has decided, after the most extensive assessment of a pesticide in its history, to remove Dursham (chlorfenapyr) from all over-the-counter products. Farmers will still be allowed to spray it on crops, however. The product is manufactured by the Dow Chemical Co. and is included in about 800 consumer products. The ban resulted from studies showing the compound caused brain damage in fetal rats. source: The Boston Globe, June 1, 2000

Study shows eating organic more nutritious. Commissioned by the Organic Retailers and Growers Association of Australia (ORGAA), the Australian Government Analytical Laboratory found that organic tomatoes, beans, peppers, and beets grown in soil enhanced with higher levels of calcium, potassium, magnesium, and zinc than the same types of conventional produce. The levels were sometimes up to ten times as high. The study was not a replicated plot experiment, however, and has not been published in a peer-reviewed journal, so the results “are only an indication and not a direct comparative study” says the ORGAA. source: Pesticides and You, Spring, 2000

Novartis bans GMOs in its food! The Swiss giant Novartis, one of the world’s largest providers of seeds for genetically modified food, has banned genetically modified ingredients in all its own food brands worldwide. The company’s consumer health division markets a variety of health foods and is responding to “the current sentiment among the population towards GMOs”. Asked about an example, 7 ha, a spokesperson said “All our business centres operate independently in totally different markets. The market for seeds is totally different from the market for food products.” source: Reuters, August 4, 2000

Triple resistant weeds found in Canada. Canola weeds resistant to Roundup, Liberty, and Pursuit — the three herbicides used in which canola has been genetically engineered to resist — have been found in the fields of a farmer in Alberta, Canada. The farmer had planted seed from three different canola varieties, each designed to resist one of the herbicides, in fields only 30 meters apart. This is the first case of natural gene stacking in canola and is blamed on mixing of seeds and wind pollination. source: Pesticides and You, Spring, 2000

Pesticides found in meconium. A study by scientists at Wayne State University has found pesticides, heavy metals, and polychlorinated biphenyls (PCBs) in the bowel movements of newborn babies. Samples were taken in 1998 from 48 mothers in Michigan who stopped the persistence of these pollutants in the food chain. While DDT has not been available in Australia since 1981, for example, 7 ha, a spokesman said “All our business centres operate independently in totally different markets. The market for seeds is totally different from the market for food products.” source: Reuters, August 4, 2000

We’re spending less on food. In case anyone doubted it, a Cornell study documents that Americans are spending less on food. In 1960 we spent 25% of our personal disposable income on food, but in 1970 it was only 13.8% and by 1997 it was down to 10.7%. Away of the New England Journal of Medicine, charges that research funding from drug and medical-equipment makers has led medical schools to strike a “Faubian bargain”. They are influenced toward favorable findings on products by accepting gifts, trips, consulting fees and other forms of compensation. She calls for a strong code of ethics banning arrangements which lead to such conflicts of interest. source: Our Toxic Times, June, 2000

Halifax bans pesticides. After banning perfumes earlier this year, the Halifax, Nova Scotia city council has approved a by-law making it illegal to use pesticides on lawns and gardens in the city. The ban will cover schools, hospitals and homes of the medically sensitive by April, 2001, and all other places by April of 2003. A Canadian Parliamentary Committee is also considering a national ban on any pesticide used for only “cosmetic purposes”. source: Our Toxic Times, August, 2000

Alaska salmon industry seeks organic label. Alaska Senator Ted Stevens is pushing the USDA for a wild salmon label to be included in his group’s organic program. Under the current draft, bees and aquatic animals are excluded from coverage. The organic label would increase the value of salmon by 25 to 35 percent, industry analysts believe. source: American Journal of Alternative Agriculture, Vol 15, No. 2, 2000

Kathy Lawrence to direct National Campaign for Sustainable Agriculture. The founding executive director of New York City’s Just Food, a longtime advocate for organic farming, has been hired by the National Campaign for Sustainable Agriculture to make federal farm policy more supportive of family farms, rural communities, a clean environment and high quality food. source: National Campaign press release, August 16, 2000

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7.1. CLAIM: Pollen and seeds do not travel very far. Isolation distances of 50-100 meters will prevent any genetic contamination.

Pollen can be carried by wind, bees and other insects, birds, and other pollinators. Animals can eat seeds and then travel long distances. The alfalfa pings can contain viable seeds. People can inadvertently transport seeds hundreds or even thousands of kilometers from the source.

Genetic pollution is one unanticipated consequence of GE technology, especially for wind and insect pollinated crops such as corn, canola, potatoes, and squash. Genetic drift is a huge issue for organic growers, since GE is prohibited by all organic standards in the world, and consumers expect organic foods to be GE-free.

At the annual meeting of the Spanish Association of Cereals and Oilsseeds Merchants in Madrid last week, Monsanto and Novartis officials said it was practically impossible to prevent the wind from carrying pollen from GM crops to nearby fields, delegates said. (See: Spanish Shippers Say Hard to Segregate Gen Foods by David Brough, 14 June 1999, Reuters)

Examples:

A. THALIANA: Arabidopsis thaliana, weed species often used for GE studies, was found to be more prolific and promiscuous when genetically modified. This implies that GE can substantially increase the probability of transgene escape, heightening the risk of producing weedy or pest populations of wild relatives. In field studies, HT A.thaliana produced prolific and promiscuous when genetically modified. The Highland varieties can contain viable seeds. People can inadvertently transport seeds hundreds or even thousands of kilometers from the source.

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members to move hives at least six miles from any GM crop site. (See: The Independent/London, 17 May 2000, “Honey Has Been Contaminated by GM Crops, Claims Friends of the Earth” by Michael McCarthy)

HONEY: Bees are making honey containing traces of genetically modified crops, it was claimed yesterday as the $210million-a-year bee industry demanded a temporary halt on further trials of the new technology. They caused consternation at the bee farmers who have been advised by the Soil Association to “keep bees away from contamination.” (See: Beekeepers seek GM halt after honey contamination by James Meikle, 17 May 2000, The Guardian)

Herbicide Tolerance (HT): Gary Barton (Monsanto’s director of biotechnology communications): “Resistance can develop” but superweeds - hybrid plants resistant to herbicide - were not an issue since they could always be sprayed with other weedkillers to which they were not resistant. (See: Independent, London, 25 Apr 1999)

HT: The potential transfer through gene flow of genes from herbicide-resistant crops to wild or semidomesticated relatives can lead to the creation of superweeds. (Lutman, P.J.W. (ed.) (1999) Gene flow and agriculture: relevance for transgenic crops, British Crop Protection Council Symposium Proceedings No. 72. Staffordshire, England. As cited in: “Ten reasons why biotechnology will not ensure public health or the environment and wildlife. The seed is also thought no GM seeds are to be sold to farmers until after 2000, The Guardian)

Oilseed Rape (OSR): Spontaneous hybrids and backcrosses occurred between GE oilseed rape and its weedy relative, Brassica campestris, under field conditions. (See: Jorgensen, R.B. and B. Andersen. 1994. Spontaneous hybridization between oilseed rape (Brassica napus) and weedy B. campestris (Brassicaceae): a risk of growing genetically modified oilseed rape. American Journal of Botany 81:1620-1626)

OSR: Studies in Denmark, Scotland and Lower Saxony in Germany have shown that GMO rapeseed can pass on its traits to, not only non-GMO rape-seed, but also weedy relatives up to 2.5 km away. This can lead to superweeds.

OSR: Scientists from the Scottish Crop Research Institute in Dundee have shown that as high as 7% of the natural rape plants in a field 400 meters away were pollinated by GM pollen. They said that oilseed rape pollen had been found 4 km away from the nearest source - further than had been previously discovered. They said “bees may be important pollen vectors over a range of distances” and concluded that “the results suggest that farm-to-farm spread of OSR [oilseed rape] transgenes will be widespread.” (See: New Scientist, April 1999)

OSR: In 1997, a Swedish field test of GE rapeseed contained two unauthorized lines in addition to the one line authorized for testing by the government Board of Agriculture. The mixup was unintentional and was uncovered during analysis of test data by the testing company, Sweden’s Sval-f Weibull. The lines, however, were produced by German transnational AgrEvo at their Canadian subsidiary, and this was where the mixup took place. Seed source: Canada. (Contact: Peder Weibull, Sval-f Weibull, +46-418 66 70 00 Robert Andren, Board of Agriculture, +46-36 15 50 00)

OSR: In 1997, an experimental GM OSR crop south of England was found to have non-GM rape varieties in store on the farm with its non-GM commercial crop equivalent. Crop source: UK. (<http://www.ries.org.uk/cms/archives/nov98/531298.html>)

OSR: Scientists have found GM OSR pollen 4.5 km from a trial site. Friends of the Earth had contracted the National Pollen Research Unit at University College, Worcester to monitor airborne pollen on roads and public rights of way around the farm scale trial for spring OSR at Model Farm, Pirton, near Watlington, Oxfordshire in June and July 1999. Pollen traps were placed on six bee hives sited in the area. Two were 500 metres from the crop, two were 2.75 kilometres from the crop and two were 4.5 km. The pollen was collected and analysed by a bee and honey consultant, Sarah Brookes, of Evesham, Worcestershire. Six samples of airborne pollen and 6 of beehive pollen were sent to the laboratory of the Federal Environment Agency in Austria for DNA analysis. All six beehive samples were found to contain GM oilseed rape pollen from an AgrEvo variety and 2 out of 6 airborne samples. The Government’s rules for the farm scale trials require only a 0.3 metre separation distance between GM crops and other oilseed crops and organic crops the recommended distance is 200 m. The trial shows GM pollen at distances further than ever previously detected and shows the scale of the threat the trials pose to non-GM crops, beekeepers and the wider environment (Amanda Brown, AAP, London, 30 Sep 1999)

OSR: And scientists are finding that some GE crops, such as herbicide-resistant canola in Canada, are cross-pollinating with wild relatives more widely than had been predicted, creating hardy weeds that can survive herbicidal sprays. (See: Rick Weiss, Washington Post, 15 Aug 1999)<http://www.washingtonpost.com/wp-srv/health/daily/aug99/gmflood15.htm>

OSR: GE DNA Found in Honey: Traces of oilseed rape DNA have already been detected in several brands of Canadian honey. (See: “GM Foods and How to Avoid Them”)<http://www4web.cableinet.co.uk/phbrwn/index.htm>

OSR: A scientific report, carried out for the British government in 1997 but not published until now, concluded that GE OSR could breed with ordinary farmers’ crops and make them inedible. The study, conducted by the prestigious Scottish Crops Institute for the Ministry of Environment, says that contamination of farmers’ ordinary fields is “inevitable” under current farming practices. (UK Sunday Independent, 21 Feb 1999)

OSR: In May 2000, GM-contaminated OSR was found to have been distributed in Europe for some two years. Seed source: Canada. (<http://news.bbc.co.uk/hi/english/uk/newsid_753000/753401.stm>)

OSR: Agriculture Minister Nick Brown insisted today that the accidental sowing of thousands of acres of farmland with GM seeds posed “no threat to public health or the environment”. In a Commons statement, Mr. Brown said about 13,700 hectares were sown with the affected stocks of seeds last year and this spring. Advanta Seeds UK advised farmers that some of its supplies of conventional rapeseed sold and sown in 1999 and 2000 in several EU countries, possibly including the UK, contained around 1% of GM rapeseed. It appeared the non-GM seed crop produced in Canada in 1998 had come into contact with a GM crop being commercially produced in the area, resulting in a small amount of GM seed in the conventional seed. In the UK about 9,000 hectares were sown with affected stocks last year and about 4,700 were sown this spring. (See: “GM Seeds ‘No Threat to Health’” By Trevor Mason and Dominic Hayes, Political Staff, PA News, 18 May 2000)

OSR: Thousands of acres of crops tainted by GM pollen have been growing in Britain for more than a year and may have been used in food production, the government admitted last night. Its scientific advisers had previously claimed there was little risk of cross-pollination with conventional crops. Hundreds of farmers have unwittingly planted the unauthorised seed over two spring seasons without the safeguards used for GM field trials, but ministries, whose officials had known about the problem for a month, insisted there was no risk to health or the environment. The seeds came from the Canadian prairies, from plants that were growing more than 800 metres away from the nearest GM varieties but still picked up traces of modified material. The tainted seed is thought to have been used on 9,000 hectares last year, nearly 2% of the rape crop. This year it has probably been used on 4,700 hectares, involving between 500 and 600 farmers. It also emerged that there had been no random testing of imports of conventional seed for rogue GM material, despite the rapid spread of GM crops through the United States, Canada and Brazil. In this country no GM seeds are to be sold to farmers until after 2000, The Guardian)

OSR: The Swedish Board of Agriculture today came to a decision on an injunction to the farmers that this year have sown seed from the lots of the oil seed rape variety Hyola 38, that has an impurity of Roundup resistant rape seed. The decision means that the crops must be destroyed by 7 July at the latest, unless a possible consent for a deliberate release has been given by the Board of Agriculture before that date. (See: Press release from the Swedish Board of Agriculture 24 May 2000, “The Swedish Board of Agriculture has decided that the crops with GM oil seed rape shall be destroyed”)
OSR: The French government has become the first in Europe to order the outright destruction of rapeseed crops that include genetically modified (GM) material. Prime Minister Lionel Jospin’s office said in a statement that 600 hectares (1,480 acres) had been planted with the seed in France. Checks had shown a relatively small proportion of GM seeds - about one per cent - of the harvest. - and at least one strain of herbicide-resistant rape- seed. “After careful examination of the case and immediate ways of remedying the situation, the government decided to call on the groups involved to proceed with the destruction of the rapeseed plants,” it said. The decision followed the news last week that seed company Advanta had sold seeds imported from Canada containing traces of GM material - still highly controversial in Europe - to farmers in France, Britain, Germany and Sweden by mistake. Advanta is part of a 50-50 venture between Anglo-Swedish group AstraZeneca Plc and Dutch cooperative Cosun. (See: Reuters, “France decides to destroy GM rapeseed crops” by Joelle Didierich, 25 May 2000)

OSR’s UK government is advising farmers to plough up crops tainted by GM seeds after securing European Commission funding for affected farms. In what will be seen as a victory for green groups, Nick Brown, the Agriculture Minister, has followed the Swedish and French authorities in recommend- ing that the GM-tainted oilseeds be destroyed. Advanta, the company which supplied the seeds, last night demanded urgent talks with ministers. David Buckridge, Advanta’s European business director, said destroying the crops was an “over- reaction”. He said the company had drawn up a strategy to monitor, segregate and harvest the 11,000 affected acres. Advanta hoped to sell the produce to countries outside the European Union, such as the US, where herbicide-tolerant oilseed rape has commercial approval. The Government’s decision comes only days after Greenpeace said it would take the Government to court unless it ordered destruction of the oilseed rape. A spokes- man for the Ministry of Agriculture said yesterday that its legal experts had now determined that any harvest from the affected fields would be illegal within the European Union because the crop did not have commercial consents. He denied that the Government had been swayed by the Greenpeace legal threat. He said that ministers had been waiting for both legal clarification and clarification from the European Commission over whether farmers will lose arable crop payments if they destroy the rogue plants. <http://www.the-times.co.uk/news/pages/tim/2000/05/29/timmsnews20018.htm> (See: London Times, 29 May 2000, Crops tainted by GM seeds to be ploughed up by Nick Nuttall, environment correspondent)

SALMON: STRAINS of farm-bred fish developed to grow fat quickly are threatening to drive Britain’s majestic wild salmon into extinction. Millions of GM fish have escaped into the Atlantic from off- shore farms in Europe and America. And the new strains are mating with wild salmon, polluting their gene pool and producing hybrids that can’t survive in the open ocean. (Mail, 19 Sep 1999)

SALMON which grow 10 times faster than normal fish and could reach 12ft long and weigh 200lb are ready to be sold in US supermarkets, according to the company that has developed them. But the prospect of giant GE salmon escaping into the wild and attempting to interbreed with native populations has alarmed both environmentalists and the industry. (See: “Monster salmon scare for fish farmers” by Paul Brown, 12 Apr 2000, The Guardian)

SOYA: In 1996, some GM-contaminated soya seed were distributed in France. Seed source: US. <http://www.netlink.de/get/Zeitung/1999/9912155.htm>


TROUT: Environmentalists warned on Tuesday that GE fish which can grow 10 times faster than normal could taint the gene pool and upset the delicate balance of nature. The latest alarm bells about what critics call “Frankenstein Foods” were sounded after a U.S firm - AF Protein - engineered fish which could cut the cost of raising trout and salmon by half. AF Protein is reported to have inserted growth hormone from one fish and genes from another fish, which can activate them, into Atlantic salmon. (See: Reuters, “Environmentalists alarmed over giant GM fish” by Paul Majendie, 11 Apr 2000)

In 1997, unapproved GM seed for 600,000 acres was mistakenly released in Canada by Monsanto. Seed source: Canada. <www.btinternet.com/~npwessex/Documents/canada.htm> No one can control the agricultural supply chain to the degree necessary to keep GM and non-GM material separate on a durable basis. The GM seeds and plants look identical to their non-GMO counterparts. All it takes is a strong wind - or one combine driver or seed-store manager with a hangover. And that is what the biotech companies are hoping for - creep- ing contamination over a period of time so that non-GM becomes gradually no longer possible. Genes from GE plants will escape and enter into wild species. This is called gene flow and the NAS says, “[T]otal containment of crop genes is not considered to be feasible when seeds are distributed and grown on a commercial scale.” (See: U.S. National Acad- emy of Sciences Report on Biotech Foods, April 2000, pg.92)

7.2. CLAIM: A separation distance of 200 meters will prevent GMO contamination of neighboring fields.

An independent study commissioned by the Soil Association of the UK warns that organic plants could be contaminated by GMOs. The suggested isolation distance of 200 metres between organs and GMOs will not prevent cross-contamination, it claims. The study says: “Pollen dispersal by insects has been recorded at up to four kilometres - some 20 times higher than the recommended isolation distance - and three kilometres by air flow.” <http://194.200.85.10/sources/154/621/4003551/000113b.htm>

Steve Jones (professor of genetics, University College, London): Those [transgenic] genes are going to get out of other plants. Everybody knows that. And we have no idea what is going to happen. (BBC, 12 Apr 1999) - “This is only the latest in a long list of field trials showing that [GE] crops, once released, are totally uncontaminable. They will become a nightmare for conventional farmers to control. For farmers who do not want to grow them, such as the organic sector, these crops will be almost impossible to avoid.” (Dr. Michael Antoniou)

John Innes Centre, one of Europe’s leading research institute on GM crops, carried out research commis- sioned by the UK Ministry of Agriculture, Fisheries and Food. They reported: GE crops “invariably” contaminate organic crops. Pollen and seed pollu- tion by GE crops could not be avoided entirely and in all cases, levels of contamination would have to be set. They estimated that 1% of organically-grown plants in any one field could become GM hybrids because of pollen spread. They concluded that contamination by seed or pollen can be entirely eliminated. (BBC, 17 Jun 1999)

But Norman C. Ellstrand, a professor of genetics at the University of California at Riverside and an expert on pollen flow, said that long-distance pollen flow is poorly understood and that the appropriate isolation distance for plant-producing plants would depend on the particular crop and drug. “It’s just not clear that setting a double distance is going to solve everything,” he said. (See: “New Ventures Aim to Put Farms In Vanguard of Drug Production” by ANDREW POLLACK, New York Times, pg.1, 14 May 2000)

7.3. CLAIM: No emergency plan is needed in case of gene contamination.

The European Commission has formulated a 5-point emergency plan if GE plants result in widespread contamination or death of wildlife. The plan includes: 1) methods and procedures for controlling the GMOS in case of unexpected spread; 2) methods for decontamination of the areas affected and eradication of the GMOs; 3) methods for disposal or sanitation of plants, animals, soils, etc. exposed during and after the spread; 4) methods for isolating area affected by spread; and 5) plants for protecting human health and environment in case undesirable effects occur. (See: Independent, London, 4 Apr 1999)

7.4. CLAIM: GE crops increase biodiversity.

HT: The use of herbicide tolerant crops undermines the possibilities of promoting biodiversity by thus reducing agrobiodiversity in time and space. (Altieri, M.A. (1994) Biodiversity and Pest Management in Agroecosystems. Haworth Press, New York. As cited in: “Ten reasons why GM crops will not save the world” and “Ten reasons why GM crops will not save the world”. These reasons are: 1) methods and procedures for controlling the GMOS in case of unexpected spread; 2) methods for decontamination of the areas affected and eradication of the GMOs; 3) methods for disposal or sanitation of plants, animals, soils, etc. exposed during and after the spread; 4) methods for isolating area affected by spread; and 5) plants for protecting human health and environment in case undesirable effects occur. (See: Independent, London, 4 Apr 1999)

Ecological theory predicts that the large-scale landscape homogenization with transgenic crops will exacerbate the ecological problems already associated with monoculture agriculture. Unques- tioned expansion of this technology into developing countries may not be wise or desirable. There is strength in the agricultural diversity of many of these countries, and it should not be inhibited or reduced by extensive monoculture, especially when consequences of doing so results in serious social
A new study warns that widespread losses of plant species and varieties are directly threatening the productivity of modern agriculture. The study by Worldwatch Institute was sharply critical of GE crops arguing that “biotechnology is no solution to this loss of genetic diversity.” While biotech companies have spliced in foreign genes to make crops resistant to pests or yield greater quantities, only nature can create such DNA - the basic building blocks of life, according to the report’s author, John Tuxill. “If a plant bearing a unique gene trait disappears, there is no way to get it back,” said Tuxill. The report, titled “Nature’s Cornucopia: Our Stake in Plant Diversity,” found a startling decline in the varieties of many common crops. In China, farmers were growing an estimated 10,000 wheat varieties in 1949, but this number had dropped to 1,000 by the 1970s. In Mexico, farmers today are raising only 20 percent of the corn varieties they cultivated in the 1930s. (See: Organic View, v.1 n.14, 28 Sep 1999)

GM genes ‘jump species barrier’

A leading zoologist has found evidence that genes used to modify crops can jump the species barrier and cause bacteria to mutate, prompting fears that GM technology could pose serious health risks.

A four-year study by Professor Hans-Hinrich Kaatz, a respected German zoologist, found that the alien gene used to modify oilseed rape had transferred to bacteria living inside the guts of honey bees.

The research - which has yet to be published and has not been reviewed by fellow scientists - is highly significant because it suggests that all types of bacteria could become contaminated by genes used in genetically modified technology, including those that live inside the human digestive system.

If this happened, it could have an impact on the bacteria’s vital role in helping the human body fight disease, aid digestion and facilitate blood clotting.

Agriculture Minister Nick Brown, who was yesterday advising farmers who have accidentally grown contaminated GM oilseed rape in Britain to rip up their crops, confirmed the potential significance of Kaatz’s research. He said: “if this is true, then it would be very serious.”

The 47-year-old Kaatz has been reluctant to talk about his research until it has been published in a scientific journal, because he fears a backlash from the scientific community similar to that faced by Dr Arpad Pustzai, who claimed that genetically modified potatoes damaged the stomach lining of rats.

But in his first newspaper interview, Kaatz told The Observer: ‘it is true, I have found the herbicide-resistant genes in the rapeseed transferred across to the bacteria and yeast inside the intestines of young bees. This happened rarely, but it did happen.’

Although Kaatz realised the potential ‘significance’ of his findings, he said he ‘was not surprised’ at the results. Asked if this had implications for the bacteria inside the human gut, he said: ‘Maybe, but I am not an expert on this.’

Dr Mae-Wan Ho, geneticist at Open University and a critic of GM technology, has no doubts about the dangers. She said: “These findings are very worrying and provide the first real evidence of what many have feared. Everybody is keen to exploit GM technology, but nobody is looking at the risk of horizontal gene transfer.

“We are playing about with genetic structures that existed for millions of years and the experiment is running out of control.”

One of the biggest concerns is if the anti-biotic resistant gene used in some GM crops crossed over to bacteria. ‘if this happened it would leave us unable to treat major illnesses like meningitis and E coli.’

Kaatz, who works at the respected Institute for Bee Research at the University of Jena in Germany, built nets in a field planted with genetically modified rapeseed produced by AgrEvo. He let the bees fly freely within the net. At the beehives, he installed pollen traps in order to sample the pollen from the bees’ hindlegs when entering the hive.

This pollen was fed to young honey bees in the laboratory. Pollen is the natural diet of young bees, which need a high protein diet. Kaatz then extracted the intestine of the young bees and discovered that the gene from the GM rape-seed had been transferred in the bee gut to the microbes.

Professor Robert Pickard, director-general of the Institute of the British Nutrition Foundation, is a bee expert as well as being a biologist and has visited the institute where Kaatz works. He said: ‘There is no doubt that, if Kaatz’s research is substantiated, then it poses very interesting questions and will need to be looked at very closely.

‘But it must be remembered that the human body has been coping perfectly well with strange DNA for millions of years. And we also know many people have been eating GM products for years without showing any signs of ill health.’

source: Sunday May 28, 2000, The Observer
In my work on transitions, I have asked this question of a lot of farmers - why farm organically? Farmers, of course, give various answers. Some make the choice to cut out synthetic materials because of illness in the family or out of a desire to make the farm a safer place for their children. For other farmers, the primary motivation is economic: the premium prices paid for some organic products or the greater independence that comes with reducing farmers attribute their decision to make changes to a spiritual awakening to their role as stewards of God’s creation. But the most frequent reason for eliminating toxic chemicals given by farmers I have interviewed is that they noticed that, compared with childhood memories, wildlife had diminished on the farm and earthworms had become so scarce that the soil seemed dead.

Organic methods offered a way to bring life back to the farm. Making the decision to change is the hardest part. Once made, you discover that you are entering a community of farmers who are seeking greater environmental, economic and social sustainability. There is a sense of excitement because there is no set orthodoxy. The solutions for each farm are unique, every season brings new discoveries and further changes.

Organic standards are amended every year as we learn more and additional discoveries are made, particularly in the area of biological controls. There is also a sense of nervousness about making these changes because there are no guarantees and not a lot of help from the usual sources, although recently there has been steady improvement in the availability of the information we need. With few exceptions, farmers who have begun to make changes themselves are generous about sharing what they have learned with other farmers.

In the marketplace, “organic” is presented with a stress on the negatives - no synthetic pesticides, herbicides, or fertilizers. Or the irritatingly misleading label “no spray.” Those of us who are farming organically prefer to stress the positive side of our label “no spray.” Those of us who are farming organic methods successfully. This is documented in the book The Real Dirt: Farmers Tell About Organic and Low-Input Practices in the Northeast, which is based on interviews with farmers running 60 farms in nine northeast states. Another recent book of interest is Future Harvest: Pesticide Free Farming by Jim Bender.

Converting to organic management is not just a matter of substituting organic materials for conventional ones. Substitution is only the first step. For a crop to do well using organic materials, you have to begin to think of the field, and then the farm as part of an integrated natural system in which all parts are interrelated. You have to go beyond substitution to redesign, changing varieties, soil treatment, pest management, rotations, cover crops and ground covers, and often modifying equipment and marketing as well. You can approach this as a big headache, or as an exciting opportunity to develop a comprehensive approach to planning for your entire farm.

Personally, I find the challenge of working with natural systems very satisfying. And at a time when so many farms are going out of business, it is a source of hopefulness to be part of a growing group of farmers and consumers who care deeply about the stewardship of the earth and see our work as the creation of a regional, sustainable food system. When the organic certification programs of the northeast came together to begin a transition to regional standards, we wrote a preamble which sets forth the philosophical framework for organic agriculture in the region:

*To replenish and maintain long-term fertility by providing optimal conditions for soil biological activity.
*To produce viable quantities of high-quality, nutritious food and feed.
*To work with natural systems rather than seeking to dominate them.
*To reduce pollution that may result from farming.
*To work as much as possible within a closed system with regard to organic matter and recycled nutrients.
*To encourage the use of renewable resources in regionally organized agricultural systems.
*To create conditions for farm livestock that ensure them a life free of undue stress, pain, or suffering, and to provide for their sustenance in a way that is respectful of the carrying capacity of the land.
*To ensure decent and non-exploitative treatment of farm workers.
*To allow agricultural producers an adequate return and satisfaction from their work, including a safe working environment.
*To maintain the genetic diversity of the agricultural system and its surroundings, including the protection of plant and wildlife habitats.
*To consider the wider social and ecological impact of the farming system.
*To educate farmers and the public about organic methods.
*To encourage new organic farms and the conversion of existing conventional farms to organic methods.
*To sustain the land in healthy condition for future generations.

The final principle is the most crucial - and it doesn’t matter if we call the kind of farming that gets us there organic or regenerative, sustainable, biological or just plain practical farming. What does matter, is that as farmers and researchers, we set aside artificial separations and we all work together because it will take all of us, all our creativity and varied talents to produce a secure supply of healthy food for the growing population of the world.
Twin Oaks Farm: Making the Organic Transition

by Jack Kittredge

Rich valleys, gouged out during the last ice age, run up and down much of central New York. These flat, broad ribbons alternate with long, steep ridges left untouched by the glaciers. The mix of bottomland fields perfect for row cropping and grassy hillsides ideal for pasture makes a terrain well-suited to family-scale dairy farming. Development pressure has not hit much of this area and good land can still be found selling at agricultural prices of under $1000 an acre. The climate can be harsh — in the winter it can hit 30 below — but the summers make up for it by reaching into the 90s.

Truxton, halfway between Syracuse and Binghamton, is the home of dairy farmer Kathie Arnold, her husband Rick, and his brother Bob. The partners manage Twin Oaks Farm, an organic dairy with 110 milkers on some 600 acres. Rick and Bob’s family came to the town in the 1930s and bought Twin Oaks in 1969. Kathie, who came from a dairy family came to the town in the 1970s, married Rick in 1979. At that time the town supported twenty-five dairy farms. Now the number is down to ten or eleven.

Kathie and the brothers started their partnership in 1980, mostly pasturing the herd on the hillsides, green-chopping in the summer and feeding the cows outside. But they were looking for higher production so in the early 1990s the team started keeping their high producing cows in the barn and feeding them higher levels of grain. But after a couple of years they became concerned about how much money they were paying out in feed bills. So they decided to make another change — this time to intensive grazing. They put a lot of the best gravel-based fields that were in corn or alfalfa into the grazing system. Now they start grazing the herd in mid April and the cows stay out until November 10 or so. The dry cows and heifers are out even longer than that.

Much of the Arnolds’ acreage is pasture that is fenced into strips. These can be subdivided with portable fencing, which they move after every grazing. They’re outside in the grazing system until July or August.

The Arnolds feed out most of their mowed grass as haylage, rather than hay or baleage. “It depends on your equipment and how you like to feed it,” Kathie says, explaining the difference. “Baleage is mowed grass, wrapped up uncut. It’s long-stemmed like hay but harvested when still moist and put in bags or wrapped so it will ferment. Haylage is mowed, dried a day or so, and chopped so it’s short. Then it’s put in a silo or it can be packed in an ag bag. You try to get air out of it so it will ferment, just like baleage.

The feed value is very similar. Haylage is easier for us to handle and feed. You have 500 tons of haylage, mixed with wheat middlings, some corn, a complete feed since the peas will provide more protein and the oats and barley, more energy. Also, when you put the 3 varieties out together the weather will certainly be right for one or the other. Experiment, Kathie explains. The peas are supposed to give nitrogen to the crop, and you’ll end up with a complete feed since the peas will provide more protein and the oats and barley, more energy. Also, when you put the 3 varieties out together the weather will certainly be right for one or the other and you’ll get a good crop of something. With all the rain this year, however, the peas are not shutting down so they may not get a combinable crop.

The Arnolds have a manure storage operation in the barn. But they find that, with 500 acres to fertilize, their manure doesn’t go very far. They use it primarily on the fields they are cropping, especially corn and grass hayfields, and also grow legumes for nitrogen. Last year they bought a couple of loads of rock phosphate, but usually don’t buy any fertilizer other than lime.

Kathie says they try to raise much of their supply of corn. It’s hard to fully dry corn in New York without using fossil fuels, so they have the crop combined and stored in an upright silo as high moisture (25 to 30%) corn. It’s ground as it goes into the silo, and ferments so it will keep. Studies have shown that this has a little better feeding value than dry corn because the cows can digest it a little better. It’s softer and the fermentation has broken it down somewhat. Also, Kathie feels, it’s better for the field to leave the stover, the corn stalks, in place than to take them off as silage.

The Arnolds’ cropping land is mostly the flat land along the river. Normally, they will plant corn for a year, then small grains, then back to corn, then to a hay crop. This year the corn isn’t as far along as it might be because of the wet weather. The small grains include a field of barley, oats and peas. It’s an experiment, Kathie explains. The peas are supposed to give nitrogen to the crop, and you’ll end up with a complete feed since the peas will provide more protein and the oats and barley, more energy. Also, when you put the 3 varieties out together the weather will certainly be right for one or the other and you’ll get a good crop of something. With all the rain this year, however, the peas are not shutting down so they may not get a combinable crop.

They also have planted 17 acres of triticale. It’s a fall crop, a cross between wheat and rye. The feed value is comparable to wheat, and this variety is supposed to have very high yields. The Arnolds tried it because they are so busy in the spring it’s good to have a crop you can plant in August. Also the weeds don’t thrive as much when a crop is planted in the fall.

The base of the Twin Oaks Farm mixed ration is haylage, mixed with wheat middlings, some corn, a small grain, a little soy and some salt and minerals. The wheat midds are a byproduct feed that comes from a mill in Pennsylvania which makes organic...
The Arnolds have paid attention to their cows’ grass. Getting those cows out on that green grass and utilizing pasture has helped a lot of farms stay financially viable. Their herd, close to 200 animals, is primarily Holsteins but they now have, in-utero, some Normandy and Brown Swiss crosses. Kathie says they are trying some cross breeding, looking for better milk fat and protein components in the milk, as well as more longevity and hybrid vigor. It’s also fun, she adds, to see a different colored cow once in awhile.

In 1995 Kathie, Rick and Bob got an opportunity to buy a 150 acre piece of land just up the road. It was excellent bottomland and they didn’t want to pass it up. Then a little farm right next to them came on the market. They didn’t want a housing development there, so they bought those buildings and 30 acres of land, too.

In order to pay for all the new land they looked at transitional to an organic dairy. But at that time there wasn’t much of a market. Organic milk was getting only $16 a hundredweight, and buyers would guarantee to pay it only on 25% of a farm’s milk. The Arnolds figured it didn’t make sense to feed their whole herd organically while selling only part of the milk that way. So they decided, instead, to increase the herd to pay for the extra land.
Kathie takes samples of triticale. When the moisture level is proper it will be ready to combine.

The Arnolds right now have 13 calves, which are kept in portable calf pens. The pens allow the calves to graze on fresh ground every time they are moved, and also have an attached pan with multiple spouts. Twice a day this pan is filled with milk, which the calves eagerly suck out. The arrangement allows the calves to be separated from their mothers for management purposes without limiting their natural need for milk and grass. Calves are kept with their mothers after birth as long as the mother is producing colostrum.

“Our cows calve year-round,” Kathie explains, “but some people like to have their herds freshen in early spring so that when the cows are producing the most milk, that coincides with the time of most pasture growth. Then they’ll be dry in January and February when you’ll be giving them feed. Sometimes on smaller farms that’s the only way you can get a vacation — to have them all dry off at the same time. For those who go for the total grass-based dairy, too, that makes a lot of sense.

“But timing the cows all the same,” she warns, “means that you’ll be milking more cows than if some are always dry. So it depends a lot on your set-up. If you have a milking parlor where you can bring in group after group of cows, you’re not so limited as to the number you can milk. If you have a stall barn, you have a limit there. With us milking year-round we’re milking fewer all the time, rather than more most of the year and none for two months. The other big issue, especially with organic production, is that the milk buyers want a year round supply. The way CROPP has dealt with this is to deduct fifty cents from the milk check in May and June and July and then add it back in for October, November and December. They don’t tell a farm not to be seasonal, but they know it costs more to make milk in the winter and they are always dealing with too much milk during spring flush. They like to keep their supply even or they’d have a marketing nightmare.”

Bob has a daughter who has graduated from college and another who will be a junior this year. Neither of his kids is interested in taking over the farm. But Kathie and Rick have a 16-year-old daughter and 12-year-old son. She says the jury is still out with them.

One thing that Kathie says they are struggling with is the problem of having more work to do than time to do it. “We have the economics down,” she asserts. “We’re a highly profitable farm. But neither my husband nor my brother-in-law want to deal with employees. So we’ve tried to do things without employees. We have a lot of our crop work custom done, we have people mow and chop and haul the haylage for us. But it seems like these past couple of years, with the added management of organic, even though we custom hire a lot of our field work it seems like we’re only one day ahead.”

Despite the amount of work involved in being certified, Kathie doesn’t feel that the paperwork is excessive. “NOFA-NY has made some changes,” she asserts. “This year Pat sent out lists with our animals from last year and we just had to update it. You can streamline things like that so we’re not recopying information from year to year. But in order to have credible organic product there has to be some way to substantiate it. If the substantiation were less there would be more room for cheating. I also think the fees are reasonable. I’ve heard people complain about them, but I don’t see it. I’m on the standards board for NOFA-NY and I have a good idea of all that the office has to do. Someone has to be paid to do it.”

So far Twin Oaks is the only organic dairy in Truxton. The Arnolds have sponsored organic tours on their farm, but to date not too many local people have come. Kathie thinks part of the reason is that organic dairying requires so much paperwork and attention to detail. In addition, it’s a real change in management. A farmer needs to cultivate instead of spraying, for instance. Farmers are independent people, she says, and they don’t like anyone telling them what they can and can’t do.
Transition to Organic: Vince Foy & Deb Yonker

by NOFA-Vermont Staff

In the past several years, over 30 farms have made the transition to organic dairy production in Vermont. The limiting factors to making the transition have been securing (and affording) organic grain, and knowledge of alternative animal health remedies. The farmers who have made the transition to organic dairy with the greatest ease are grass-based farmers who rely a lot on pasture for seasonal feed, fertilize with manure, and have experimented with alternative health remedies such as homeopathy. For those farmers who have not used synthetic herbicides or pesticides in the last 3 years or synthetic fertilizers in the past year, the transition to organic has been fairly straightforward. Farmers who had been using chemical fertilizers on their hayland and a starter fertilizer or herbicides for corn have had to make the transition to organic over several years. Additionally, many farmers find that their cows need to make the change to organic grain slowly. Other changes that farmers have to make are: feeding all of the young stock organically instead of using milk replacer, discontinuing the use of breeding hormones, and discontinuing the non-emergency use of antibiotics.

Vince Foy and Deb Yonker made a successful transition to organic agriculture during the 1990s. They took three full years to make the transition on their northern Vermont dairy farm, experimenting during those years with cultivating corn and ending chemical fertilizer use. They call their farm Lewis Creek Jerseys, and manage 177 acres of owned and leased land, including 12 acres in corn, 123 acres in hay and 40 acres in pasture. They milk 70 registered Jerseys.

Deb and Vince cultivate their corn for weed control. He cultivates 3 times, 8 days apart and then spreads sweet annual red clover. Whereas they used to use a chemical fertilizer as a corn starter, they transitioned to a granulated whey fertilizer and also put on 20 tons/acre of manure on corn ground in the spring. Their pasture system was highly developed before the transition so that their animals could be fed 6 months out of the year on a high quality feed. By the time they transitioned, they had put in good new seedings of alfalfa and orchard grass.

The couple has found nitrogen fertilizer to be the limiting factor in organic production. Whereas they used to use some synthetic nitrogen on their grass lands, they now use manure at 12 tons/acre and high magnesium lime where needed. They get 13-18 tons/acre for short season corn, 3 tons/acre for new seedings of alfalfa (3 cuttings, no grazing), and 2 tons/acre for grass.

Vince and Deb receive 45,000 predator wasps every 3 weeks from Spalding Laboratories for fly control. Spalding sends them 4 different species making the package of wasps adaptable to different climates. They spend $500-600 annually on wasps. Although they used just to release the wasps in the barn, they are currently releasing most of the predators in the pastures. They also use fly strips, fly traps and a fly repellent oil that is 5 gallons of mineral oil mixed with witch hazel, citronella, eucalyptus, cedar wood oil, pennyroyal and some skin-so-soft. They currently find that cystic ovaries are the biggest herd health challenge on the farm. Prior to their transition Deb had experimented with homeopathy, so they were able more easily to develop an alternative approach to animal health. They found that their vet bills went down $650 in the first year of their transition because they stopped routine dry treatment and used homeopathy more frequently.

Vince has been very frustrated with both the quality and inconsistency of organic grain and found that their cows lost condition when they went to the organic grain at first. Their cows are fed grain 4 times a day, before and after milking, and are fed second cut hay during milking and corn silage and haylage after milking. Vince has found that “the rumen works better and the utilization of grain is better when grain is blended with chopped feed. The grains get suspended in the chopped feed and they eat better. Maximizing the utilization of grain is critical when organic grain is so expensive.”

In the last year Lewis Creek Jersey Farm was under conventional management, they grossed $125,000 from 70 cows with a total of 908,000 lbs of milk shipped. In the first year in which they were completely organic they received $165,000 from 70 cows with a total of 890,000 pounds of milk shipped. The greatest increase in expenses in making the transition to organic has been in the cost of grain.

Vince and Deb have been farming for almost 15 years and feel that since they made the transition to organic production, they now feel more in control of the market and their destiny. “We like the fact that we rely on our own resources more. We are learning about homeopathy by experimenting and talking to other farmers.” In addition, they stated “our lifestyle has improved and we are able to pay more for help.”
Connecticut NOFA’s “Transitioning To Organic” Conference

by Robert J. Durgy,
CT NOFA Certification Administrator

For the past several years CT NOFA has held a Transitioning to Organic Conference. Our intention has been to introduce growers who are requesting certification for the first time to the organization. We try to cover every aspect of certification so a complete understanding of the rules and requirements is gained. This includes an introduction to organic fertility and pest management, marketing opportunities and a review of the standards and application. The conference is held in January, after the standards for the upcoming year are published. Interested producers can receive standards and an application at the meeting.

The daylong session usually starts off with an introduction to weed and insect management. Producers are often surprised by the importance of soil fertility and good farm management in pest control. An experienced grower provides a tool and equipment presentation. Having the right tool can make your life much simpler. Soil fertility is the subject for long time grower and NOFA member Bill Duesing. Bill offers an insightful view on soil health. Marketing opportunities are shared with new producers to encourage a unity among members. Connecticut producers have formed the Certified Organic Associated Growers (COAG) to expand marketing opportunities for its members. Our producers have found working together has greatly improved their sustainability and success. The day is concluded with a review of the application process. The application can be an intimidating thing for a first timer. A thorough account of past, present and future management plans is a completely new concept for many producers. Inevitably, mistakes are made, but we stress that mistakes are okay. The certification committee should not be envisioned as an authoritarian tribunal. The committee is an instrument of the membership and an information resource for producers.

We always have an interesting mix of new and old certified producers as well as other interested people such as fertilizer dealers and the like. This past year’s conference led to a particularly lively discussion (it was more like a debate) on the role of genetically modified organisms in blended fertilizer mixes. Is there any way to realistically monitor GMOs in the hundreds of products available? Do we have strong enough purchasing power to demand GMO-free products? Issues such as this are one of the many problems that face a new certified organic producer. It is more than choosing the right tool to manage a problem. Producers are encouraged to consult with the certification committee when faced with an interpretation of the standards.

Judy Perkins, a vegetable grower from Woodstock, is certified for the first time this year. Her family’s farm is located in Connecticut’s quiet corner, northeast of Hartford on the Massachusetts border. She markets mixed vegetables and eggs from a roadside farm stand. I became interested in being certified organic because I believe that transitioning to organic is the only feasible way to sustain our family’s farm, both ecologically and economically, through the 21st century; it is the only way to preserve the land and the way of life. This is true for most transitioning producers. They have been growing organically anyway for their own piece of mind and see organic certification as a way to maintain economic viability.

I recently asked Judy about the conference she attended this past January. All portions of the conference contained interesting and useful information, but I think I gained the most practical information from the exchange of questions, answers and ideas between those people attending the conference. One of the first things I learned when I started out as an agricultural educator was to let the growers teach each other. Growers that talk to each other and learn from each other strengthen the entire industry.

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Rodale: Studying the Organic Transition in Depth

The Natural Farmer Fall, 2000

Excpected, with permission, from Rodale Institute's "Farming Systems Trial: The First 15 Years" by Cass Peterson, Laurie E. Drinkwater and Peggy Wagoner

Summary

Conventional agriculture, which relies heavily on synthetic fertilizers and pesticides, has come under increased scrutiny because of evidence that modern production techniques are having a negative impact on the environment. Organic agriculture has been put forth as a less destructive alternative, but worries have been raised that it is being harmed by questions about whether such practices can produce food and fiber as efficiently or as economically as conventional methods.

The Rodale Institute’s Farming Systems Trial, now in its 19th year of continuous large-scale experimentation, was established to answer these questions. This report summarizes the first 15 years of the experiment. The primary conclusions:

* After a transition period of about four years, crops grown under organic systems yield as well as and sometimes better than crops grown under the conventional system. Monomonovalent organic systems can out-produce the conventional system in years of less-than-optimal growing conditions such as drought.

* Organic techniques significantly improve soil quality, as measured in structure (tilth), total soil organic matter, and biological activity. These improvements enhance the productivity and reduce the potential for negative environmental impacts such as nitrate leaching and erosion.

* Organic systems that use only legume cover crops as a nitrogen source, as well as those that use animal manures, are capable of supplying enough nitrogen to produce crop yields equivalent to those grown with mineral fertilizers-even for heavy nitrogen users such as corn. Overall, available nitrogen levels are increasing in the Trial’s organic systems while nitrogen levels are decreasing in the conventional system.

* The organic systems absorb and retain carbon at significant levels, an important finding that may suggest a role for agriculture in reducing the impact of global warming.

* Nitrogen losses through leaching-a pollution problem that can have human health consequences-were much higher in the conventional system than in the organic systems.

* After a transition period characterized by reduced yields, the organic systems were competitive financially with the conventional system. Projected profits ranged from slightly below to substantially above those in the conventional system, even though economic analyses did not assume any price premium for organically grown crops.

* Soils managed organically show a higher level of microbial activity and a greater diversity of microorganisms-long-term changes in the character of the soil community that can promote plant health and may positively affect external elements such as carbon and nitrogen are cycled in the soil.

The Research Design

Because The Institute wanted results of the trial to be useful to farmers as well as to academic researchers, farmers were active participants throughout the 15 years of research. Cropping patterns and tillage, cultivation, fertilization, and pest control practices reflect the techniques used by full-time farmers, who must balance economic concerns and time constraints with environmental and soil stewardship concerns.

The site chosen for the experiment also reflects The Institute’s desire to make results useful to farmers. The Trial was established in 1981 on a 12-acre site at The Rodale Institute Experimental Farm (formerly The Rodale Institute Research Center) near Kutztown in southeastern Pennsylvania. The soil type is mostly a silt loam, and the land slopes gently to the south.

The soil is naturally compacted in most areas at a distance from 20 to 35 inches below the surface, which can prevent drainage and hamper crop growth during periods of excessive rain. Small areas of the experimental site are on different soil types with no subsurface compaction.

The site was chosen because it is typical of farmland in the area and presents the same crop-production challenges in overly wet or overly dry years. The land had been used to grow corn almost every year since at least the early 1960s, using chemical fertilizers and pesticides. Thus, the condition of the land at the outset of the experiment was typical of conventionally managed farmland in the area.

The physical size of the site allows the use of farm-scale equipment, which is not always possible in research conducted on much smaller experimental plots. Again, the size reflects the pragmatic needs of farmers, who require information on the practicality of farming methods as well as on yield, environmental, and cultural benefits.

The Trial encompasses these 3 cropping systems:

Conventional: This system represents a typical cash grain farm operation. It uses a simple five-year crop rotation of corn, soybeans, corn, and soybeans, reflective of commercial operations in the area and throughout the Midwest, where huge tracts of land are devoted to the production of these crops for animal feed. Fertilizer and pesticide applications follow the recommendations of The Pennsylvania State University.

Organic, animal-based: This system represents a livestock operation. Grain crops are grown, but for animal feed, not cash sale. The system uses a diversified five-crop rotation that is more complex than the rotation used in the conventional system: corn for grain, soybeans, corn for silage, oats or wheat, and red clover hay.

Aged cattle manure is used as a nitrogen source, and is applied two years out of five, immediately before plowing the ground for corn. Additional nitrogen is supplied by the legume cover crops and legumes such as hairy vetch or red clover hay. The system uses no herbicides, relying instead on cultivation, weed-suppressing crop rotations, and relay cropping, in which one crop acts as a living mulch for another.

Organic, legume-based: This system represents a cash grain operation without livestock. Like the conventional system, this system produces a cash grain crop each year, but it uses no commercial fertilizers, relying instead on nitrogen-fixing green manure crops as the primary nitrogen source.

The rotation includes corn and soybeans, and like the animal-based system it also includes a greater variety of crops in the system rotation. Both organic rotations include a small grain such as wheat or oats grown alone or interseeded with red clover; soybeans are grown alone or seeded into a small grain. Either hairy vetch or red clover are grown as the green manure and are incorporated before corn planting. The initial five-year crop rotation in the legume-based system has been modified twice as the need for improvements became clear. Throughout the 15-year period the same crops have been grown, only the sequence and frequency have been changed. Weed control practices are the same as in the organic, animal-based system.

Answering the Question of Initial Lower Yield

Switching from conventional farming practices to practices that require fewer or no purchased inputs such as fertilizer and pesticides has a natural economic appeal, aside from any environmental benefits that might be achieved.

But farmers and agricultural scientists alike have long recognized that changing to organic practices has generally resulted in reduced yields - a powerful disincentive for economically pressed farmers.

In 1980, the U.S. Department of Agriculture released a report outlining the problem and calling for research to identify the reason for lower yields on organic farms. The Farming Systems Trial was launched in part to answer that research need.

The trial essentially mimicked the process that a typical farmer would go through in converting from conventional to organic practices. Scientific measurements and observations guided the experiment and contributed to an understanding of what was happening at the most elementary level of farming - the soil - as manures and diverse crop rotations replaced synthetic fertilizers.

The results also suggested several methods that farmers might use to maintain yields during the period of transition to organic practices.

Inadequate nitrogen was the main cause of lower corn yields in the early years of the trial. As nitrogen supplies improved, corn yields rebounded. It makes sense, then, to start the transition to an organic rotation with a crop that is less demanding of nitrogen than corn, such as soybeans, a legume forage or cover crop, or small grains.

In the early years, a gradual transition that reduces but does not eliminate commercial nitrogen fertilizers may be necessary to avoid low yields and low economic returns. If organic certification is important for economic reasons, organic nitrogen sources such as manure or composts could be purchased.

After the transition, corn yields in The Institute’s organic systems, which produce corn at least every third year, are comparable to the yields from a conventional corn-soybean rotation.

While the organic systems often showed yields comparable to the conventional even when they were weeder, excessive weeds can reduce yields, especially in years when there is too little rainfall. Organic systems using manure are particularly vulnerable to weeds because of seeds introduced through the manure, and soybeans are particularly vulnerable to yield reductions from weed competition.

Timely cultivation is important, but not always possible if wet conditions prevent field work. Using crop rotations that help suppress weeds, therefore, is critical. Alternating cool-season crops such as canola and small grains with warm-season crops such as corn and soybeans helps control weeds.

Including a diversity of crops also allows farmers to vary the timing of primary tillage, which helps prevent weeds from becoming established and producing seed.

Relay cropping a legume forage crop into wheat allows the farmer to accomplish the twin goals of...
income production and fertility maintenance in the same year, and aids in weed control as well.

**Soybeans**

Because soybeans can fix their own nitrogen, yields were not affected by the lower nitrogen levels in the organic systems in the early years, as corn yields were. From 1982 through 1985, soybeans in both organic systems yielded significantly higher than the conventional system. The soybean crops failed in 1991 in all cropping systems due to poor quality inoculant and are not included in the analyses.

In the second five years of the Trial, soybean yields in the legume-based organic system were 37% lower than in the other two systems as researchers experimented with cropping methods and rotations to achieve the complementary goals of yield, income, soil fertility, and weed management. In the last five years, soybean yields have been stable across all systems.

On average, soybean yields in both organic Systems have been as high as those in the conventional system, even though the organic systems tend to be weedier than the conventional, which uses herbicides. However, weed levels in soybeans have been increasing over time in the organic systems. In three of seven years studied (in the middle of the 15-year trial), soybean yields suffered from high weed pressure, suggesting that soybeans are more sensitive to weed competition than corn.

**Small Grains and Forage**

The conventional system, which uses a standard commercial rotation of corn and soybeans, does not grow small grains or forage crops such as hay or corn for silage. However, these crops are a part of the more complex rotations in the two organic systems.

The manure-based system requires forage crops because of the need to produce feed for livestock. In the legume-based system, the experiment initially harvested the red clover as a hay rather than plowing it down as a green manure. These crops contribute soil fertility and weed suppression.

Because the conventional system did not grow these crops, it was not possible to directly compare yields from the organic systems to those in the conventional system. In general, yields of wheat, oats, barley, hay, and corn grown for silage rather than for grain were comparable to the average for conventionally managed farms in Berks County, home of The Institute’s Experimental Farm.

**Soil**

Among the most important findings was that adding a variety of organic residues with a low carbon-to-nitrogen ratio (such as manure and legume green manure crops), in conjunction with a diversified rotation, significantly reduced carbon and nitrogen losses from the soil and increased both active and stable soil organic matter.

The trial also demonstrated that organically managed soils achieve better physical structure. Soils in the organic systems gradually became looser and more porous, and absorbed and held water better than conventionally managed soils. These improvements in soil quality directly affected yields, helping the organic systems maintain high production even in drought years, for example. They also enabled the organically managed soils to perform their broader ecosystem role more effectively.

The organic soils had reduced levels of nitrate leaching compared to the conventional soils and were more effective as a carbon sink. These findings have important implications for the global environment as well as agricultural productivity.

In summary, as measured by soil respiration rates and available or potentially available nitrogen levels, both of the organic systems indicate higher levels of microbial activity than the conventional system. Of potentially more significance, the organic and conventional systems have differences in the species composition of microorganisms.

The finding suggests that, while short-term increases in microbial populations and activity are influenced by seasonal factors and the types of organic residues available for microbes to feed upon, long-term changes in the composition of the microbial community are more strongly influenced by long-term farming practices. These differences in community structure persist even when the same residues are added to both soils under the same conditions.

**Nitrogen**

In the early years of the Trial, plant-available nitrogen levels in the two organic systems clearly were not adequate to produce yields of corn that were equivalent to the conventional system - corn is used as the benchmark crop because of its heavy requirements for nitrogen. In the first five years, corn yields in the organic systems averaged 28% lower than those in the conventional system.

In the last 10 years of the Trial, average corn yields have been equivalent in all three systems. Soil tests indicate that plant-available nitrogen has become more abundant in both organic systems, and has declined slightly in the conventional system. However, the change in soil nitrogen levels cannot be explained simply by accounting for the quantity of amendments applied, residues returned to the soil, and crop exports.

Estimates of nitrogen inputs (in the form of crop residues, animal and green manures, and commercial fertilizers) and nitrogen removed by harvested crops indicated that the legume-based system received about half as much nitrogen as did the other two systems. The legume-based system has operated with about equal nitrogen inputs and exports (some years there is a small surplus, while the manure-based and conventional systems had more nitrogen applied than was removed by crops resulting in a significant surplus of nitrogen.

This would suggest that soil nitrogen levels should increase in the manure-based and conventional systems, and should stay about the same in the legume-based system. In fact, while total soil nitrogen did increase in the manure-based system, and remained the same in the legume-based system, it declined significantly in the conventional system.

The explanation for this difference appears to be similar to the reasons for differences in the carbon cycle, i.e. differences in the quality of organic residues (the form of nitrogen additions) as well as crop rotation also influence nitrogen cycling. For example, an experiment that used tracer analysis to follow nitrogen through the soils of the legume-based and conventional systems found a difference in how soil microbes handle nitrogen from organic versus mineral sources.

The experiment, conducted in 1987 and 1988, showed that nitrogen supplied by legumes was retained in the soil better than nitrogen supplied by mineral fertilizers. Nearly twice as much nitrogen derived from legumes remained in the active fraction of soil organic matter a year after a cover crop was tilled in, as compared to...
carbon levels, which reflects total organic matter, the nutrient-holding capacity of the soil. Both organic systems received large amounts of live plant residue, and the manure-based system received animal manure as well. The conventional system received only crop stubble. Live plant residues and animal wastes contain a higher proportion of nitrogen, relative to carbon, than does dead plant residue. While the conventionally managed system is still yielding adequately after 15 years, measurements of soil nitrogen indicate that the soil is gradually becoming more impoverished, and future yields may depend more heavily on nitrogen inputs.

Carbon and Soil Organic Matter

Nitrogen availability in soil is closely linked to carbon levels and soil organic matter. Organic materials returned to the soil, in the form of leguminous residues, animal manures, or crop residues, is converted to soil organic matter, which can be divided into two parts: the active fraction consists of plant available nutrients and living organisms; the stable fraction (sometimes called humus) represents the nutrient-holding capacity of the soil.

The two organic systems showed increases in soil carbon levels, which reflects total organic matter, while the conventional system did not.

Nutrients and Microorganisms

Incorporating organic residues as nutrient sources results in a fundamental change in the agricultural ecosystem because a large and healthy population of soil microorganisms is needed to release nutrients from organic residues into forms that plants can use.

Mineral or inorganic fertilizers bypass the soil community by supplying nitrogen in simple forms that are easily taken up by plants. These forms of nitrogen are also more susceptible to being lost through leaching or converted to gaseous forms that are lost to the atmosphere. When nitrogen is supplied in the form of organic matter, it is bonded to carbon in complex molecules that must first be broken down by soil microorganisms.

The first step in this process is called mineralization. Microorganisms release nitrogen in the form of ammonium (NH₄⁺), which can be taken up directly by plants. Ammonium also can be bonded to soil organic matter and become part of the stable humus, or it can be further broken down by organisms called nitrifiers, which bond its nitrogen to oxygen, forming first nitrite (NO₂⁻) and then nitrate (NO₃⁻).

Plants can also use nitrate, and many plants prefer that form of nitrogen. However, nitrate is very susceptible to leaching so optimal management requires that only small amounts of nitrate be present for plant uptake. Nitrate molecules are negatively charged and cannot be held in the soil by clay particles or by humus, both of which also carry negative charges. Positively charged nutrients such as calcium, potassium, and magnesium, as well as the positively charged ammonium molecules, can be held by humus or clay particles.

Thus carbon and nitrogen cycling are linked through the decomposers. Microorganisms break down organic matter to make immediately available nutrients, while also forming more stable materials that can store nutrients for future use.

Other Nutrients

The two other primary plant nutrients are phosphorus and potassium. Heavy applications of manure prior to 1940 helped to increase phosphorus fertilizer since then left a substantial reserve of phosphorus in the experimental fields. Phosphorus and potassium levels are decreasing at similar rates in the conventional and legume-based systems and are decreasing at a slower rate in the manure-based system because of the phosphorus and potassium contained in manure.

Economics

Farming is inherently a risky way to earn a living. Profits depend on many factors, not all of them under the farmer’s control. A farmer’s management skills and the quality of his or her soil are critical parts of the economic picture, but so are the weather, the costs of production, and the fluctuating market price for harvested crops.

Since farmers have little control over the prices they will receive for their crops, many are attempting to improve income by reducing production costs instead. Bolstering soil fertility with animal or green manures, instead of purchased fertilizers, is one way to cut costs.

Higher profits for the organic farms came largely from higher corn yields, which nearly doubled after the 1981-84 transition period. Even so, the organic farms had less corn to sell because the conventional farms, because corn was not grown as frequently under their crop rotation schemes. This was an income disadvantage when corn prices and yields were high. On the other hand, the organic farms suffered less than the conventional ones when prices or yields were low, because they had crops other than corn to sell.

In 1986, the legume-based organic system switched to a more intensive three-year rotation to include additional cash grains such as wheat and barley. There was also hay and straw to sell - typically low-value crops, but marketable crops nonetheless. One third of the income from the organic farm came from sources other than corn or soybeans.

The diversity of crops meant that the organic systems were inherently less risky than the conventional systems. While profits for the organic farms were not usually as high as those on the conventional farm in good years, they weren’t as low in bad years, either.

Expenses on the organic farms were significantly lower than on the conventional farm. The two conventional farms in the analysis spent about $35,500 more each year - 95% more - than the conventional one from 1986-90, and was $4.4 per acre less profitable from 1991-95.

The high labor requirement of the organic system would make it difficult to hold off-farm employment for much of the year - a disadvantage when many farmers are finding it necessary to supplement income by working off the farm.

How farmers view these two types of costs - the transitional cost of moving to organic production and the value of family labor - is critical to how farmers feel about the relative profitability of organic and conventional systems. Counting these costs favors conventional systems; not counting them favors organic.

Because of the diversity of crops being grown and the need to balance soil fertility needs against income needs, the organic system also required more management skills than the conventional one. This was illustrated by the Farming Systems Trial itself. Rotations and crop mixes changed through the years as researchers experimented with ways to enhance the yields and frequency of cash crops, suppress weeds, and still attend to soil fertility.

The economic studies were limited in their scope. The analysis did not attempt to assess the economic costs of off-farm environmental impacts or the economic benefits of reduced water and air pollution, nor could they go far enough into the future to determine long-term profitability when the expense of investing in soil fertility is fully paid off.

The analyses also were deliberately conservative in assessing profits for the organic farm, because they did not take into account the higher price typically commanded by organically grown crops.

The reason is that the organic farm, because of its greater diversity of crops, has a greater labor requirement. If the farm increases beyond a certain size, family labor is not sufficient to handle the workload and outside help must be hired.

This analysis points out what may be a significant disadvantage for organic farms relative to conventional ones: the labor required to operate them. On diversified organic farms, labor requirements tend to spread more evenly over the year than on the conventional farms, which have much higher costs of labor during planting and harvesting seasons and low at other times of the year (from July through September, the conventional farm in the FST required no field operations at all).

Overall, the organic farm, which involved mechanized cultivation and the planting and harvesting of a greater diversity of crops, required about 27% more hours of work than the conventional.

When this higher labor requirement was factored into the economic analysis, and the value of unpaid family labor was subtracted from gross profits, the organic farm returned only $2.49 per acre more than the conventional one from 1986-90, and was $4.45 per acre less profitable from 1991-95.

Readers interested in reading the full 40 page report from which this was excerpted can receive one from Rodale Institute, 611 Steffriedale Rd., Kutztown, PA 19530-9120, (610) 683-1400, or info@rodaleinst.org.
Seeing the Light

Sween corn on the Martens farm

by Mary-Howell R. Martens

“I wish you didn’t have to do that!” I was standing by the kitchen door, several months pregnant with our second child, as I watched my husband, Klaas, leave the house dressed for battle in his white Tyvek “zoot suit” and special green plastic gloves, ready to attack and subdue the enemy.

“Me too, but what choice do we have?” It was 1991, the first year after we split up the farm partnership with Klaas’ two brothers. It was not easy farming over 600 acres, just the two of us. Farm prices are never good, weather is always risky, but at least we had one advantage over many of our neighbors. Weed control was a relatively simple problem since Klaas was very good at planning herbicide combinations and schedules. In fact, many people called him for advice in his unofficial role of neighborhood pesticide advisor. In my job in the grape breeding program at the New York State Agricultural Experiment Station, I was also responsible for planning the vineyard spray program, so Klaas and I spent numerous romantic hours of our courtship discussing the relative merits of this chemical and that.

Later, after a long and successful day of spraying, Klaas would invariably come in the house with clothes reeking of pesticide despite the Tyvek suit, his head aching and a queasy stomach. We wanted to believe that it was due to ‘just a germ’ since he had been working such long hours, but we knew better. My husband was slowly being poisoned.

How do two people so apparently committed to the agribusiness ideal of American farming end up operating over 1100 acres organically just 8 years later? We believe that we were like many conventional farmers - forced to use the chemical fertilizers and pesticides because we saw no possible alternative. We began to realize that it might be better for us, our family, our land, and our environment. We farmed conventionally because we had been told so often that it was the only way to survive in agriculture today.

Our rebirth came later that year when we read a small classified advertisement in a regional farm paper, a company was seeking organic wheat. Immediately Klaas was on the telephone and we were excited - was there really a market for organic wheat? We quickly decided that we would leap at this new challenge. If there was a way to grow our crops organically, we were going to find it!

Since then, our education has gone into overdrive. Our greatest resource has been other people. We discovered to our surprise a few farmers in our area who had been farming organically for years. Many of them, especially John Myer in Romulus, have been of invaluable help with advice, patience, and encouragement. Transition is a frustrating period for many farmers, especially those without a support system of like-minded organic farmers who are successful, we might have concluded that organic farming could not work. Our local OCIA organic certification chapter, New York Certified Organic, Inc., provides such a haven of encouragement. Transition is a frustrating period for many farmers, especially those without a support system of like-minded organic farmers who are successful, we might have concluded that organic farming could not work. Our local OCIA organic certification chapter, New York Certified Organic, Inc., provides such a haven of encouragement.

Many transitioning organic farmers worry about having sufficient nitrogen in the soil. In a true organic system, we depend on the biological activity of the soil for our main source of fertility. It is important to think of the soil/crop relationship as a living system where different inputs are closely related. Every change you make affects everything else. Most of the cultural weed control techniques also increase soil biological activity and therefore also improve soil tilth and fertility. We make frequent use of cover crops, either interseeded with a winter grain or planted after an early-harvested crop is removed. Legume cover crops particularly add valuable levels of nitrogen to the soil, thereby reducing need for purchased inputs. Cover crops also improve soil tilth, increase soil organic matter, increase soil microbial diversity and activity, and protect the soil from erosion. We also use moderate amounts of composted leaves, gypsum, composted poultry manure, and other approved organic fertilizers but we try to use as little purchased fertility materials as possible. Transitioning farmers should be very careful about using uncomposted manure, since it tends to increase weed pressure, especially when used at high rates. Raw manure and rock dusts, such as rock phosphate, are best applied to a cover crop. This allows time for the nutrients to be converted into a stable, available form before the main crop is planted.

Probably the most valuable ‘inputs’ that a transitioning farmer can purchase are good quality soil tests and the assistance of someone skilled in organic soil fertility management to help evaluate the results and recommend appropriate amendments. We have found that achieving a good calcium/magnesium ratio is essential for weed management and improving soil structure. When magnesium levels are high relative to calcium levels, weed problems and soil compaction are more likely to result. On soils with a CEC above 8, a 7:1 (% saturation) calcium/magnesium ratio will probably be optimal for weed control and crop plant growth. Many prevalent weed species in fields throughout the United States, such as foxtail and summer annual grasses, thrive in hard compacted soils, most often soils that are also low in calcium and high in magnesium. We have found that gypsum (calcium sulfate) is a good, inexpensive way to add both valuable calcium and sulfur without increasing magnesium, as some forms of lime will do. Other tough weeds, such as quackgrass and nutseed, are much less common on fields that are cultivated and where the soil is loose.

Weed control presents THE primary challenge to organic crop farmers. Especially during the three-year transition period before a field is fully organic, keeping the weeds from getting out of control often seems like an insurmountable task. After land becomes fully organic, weed pressure does dramatically decrease and the weed species change. Before any machinery is considered, weed control must start with cultural methods. It is a great deal easier to prevent weed problems than to kill them. Heavy reliance on chemicals in modern agriculture has made the past generation forget that farmers do have much control over the initial weed population in a field.

There are a number of cultural weed control concepts that must be considered. These include basic sanitation, that is, simply preventing new weeds from being introduced onto the farm. The use of clean seed, moving weeds around the edges of fields or after harvest to prevent them from going to seed, and composting manure before application can greatly reduce the introduction of weed seeds and difficult weed species. Crop plants will become more competitive when soil drainage is improved. Tillage methods that aerate the soil can increase biological soil activity and plant growth. Selection of crop varieties that are vigorous and can shade the soil surface can prevent weeds from ‘breaking through’ the canopy and growing above the crop. Recent plant breeding has produced chemically dependent crop varieties that are shorter and less competitive. Some older crop varieties are actually much better suited to organic production. One way that plants compete with each other is by releasing chemical substances that inhibit the growth of other plants. This is called allelopathy and should be viewed as one of nature’s most effective ways that plants deal with competition. Species of both crops and of weeds exhibit this ability. Allelopathic crops include barley, rye, annual ryegrass, buckwheat, oats, sorghum, sudan-sorghum hybrids, alfalfa, wheat, red clover, and sunflower. Vegetables, such as horseradish, carrot and radish, release particularly powerful allelopathic chemicals from their roots. The allelopathic effect can be used to advantage when oats are sown with a new
Nitrogen if the seed is inoculated with an appropriate bacteria. A legume is not dependent on chemical fertilizer as other crops because they have the ability to fix their own nitrogen if the seed is inoculated with an appropriate strain of Rhizobium bacteria. It is possible to cultivate soybeans repeatedly if weed pressure is especially heavy. We have had no yield reduction growing first year transitional soybeans. Corn, however, is a poor choice during transition. We try to plant a winter grain after the soybeans, seeded down to clover. We have tested a number of different weed control tools. Best control has come from a combination of tools and cultural techniques. An initial tillage of fields a week or ten days before planting will allow one flush of germinating weeds to be killed during final field preparation. In heavily infested fields, late spring plowing will reduce weed pressure by burying large populations of germinating weed seeds. After planting, a number of tools are used for ‘blind cultivation’ before the crop emerges. At the time when conventional farmers would be out spraying their fields, we are ‘blind cultivating’ with a Kovar coil tiller harrow, a Lely weeder or a rotary hoe, depending on conditions.

A second blind cultivation follows a week later after the crop has emerged. Surprisingly this does little damage to the young crop seedlings, but destroys the second flush of weeds effectively. In about another week, it is time for cultivation. A tractor equipped with both a front and rear mounted cultivator goes over the fields carefully. If timing techniques and weather have been favorable, the crop grows rapidly and no further weed control is usually necessary. If time permits, we may cultivate a second time, especially in soybeans.

The marketing of organic crops is fun, extremely demanding, frustrating at times and very different from marketing conventional crops. Our buyers visit us at home and call all hours of the day, for, on a very fundamental level, we are in partnership with them. There do seem to be many companies getting into the marketing of organic products right now and it is important to establish an on-going relationship with a reputable company that will pay on time. Going for the highest price is not always the most profitable. We have found that when a price sounds too good to be true, it probably is. Getting greedy in today’s organic market is asking for trouble. While it is tempting to try to grow as many acres of high-value crops as possible, this is the recipe for disaster. We must change our thinking from the chemical farming model. If you care for the health of the soil, first, profits will follow.

Klaas and I have also started an organic feed business. We work with NOFA-NY certified farmer, Norm Wigfield to supply feed for the rapidly expanding organic dairy and chicken business in New York. For the right person, value-added organic businesses such as this can be profitable, but the financial risk is also higher.

In order to see the true cost and profit of farming, we maintain detailed records of all inputs, including any purchased inputs, time and labor, and all harvest and sales data. As certified organic farmers, we are required to keep these records for our audit trail that we show at each annual inspection but they have a much greater importance than merely that. We analyze our field and harvest records carefully each year to determine which practices worked, where we had weed problems, and whether we have made a profit on each field. From such analysis, we can easily determine that organic farming pays - our cost of production is lower, even including a fair assessment of the value of the additional labor requirements, our yields are equal to what we achieved farming with chemicals, and the organic products bring a premium price. On 1100 acres, such records would be nearly impossible without the assistance of one of our most important pieces of farm equipment - our computer and the computer programs we have written that are specifically designed for our farm.

The face of organic farming is changing. The traditional 10 acres of organic vegetables still represents an important facet of the organic community, but we with our 1100 acres of field crops are not unique, nor are we the largest organic farm in the area. In New York, there is a rapidly growing number of organic farms as ours and a barn of 50-60 organic dairy cows not unusual. Organic farming has freed us from bondage to the huge multi-national agribusiness companies. We no longer purchase our inputs from them nor do we have to sell our products to them. Organic farming has also freed us from bitter competition with other farmers and the drive to get bigger and deeper in debt, the usual pattern for agriculture today. We also hope that organic farming will allow the next generation - our children, Peter, Elizabeth and Daniel - a chance to safely be a part of the farm and to eventually join us in the business.

This is possible for other farmers too! Right now there is enough of the organic market to go around. Working together, organic farmers can make significant change in American agriculture today!
The following article first appeared as a cover story for the March/April 2000 issue of IN BUSINESS: Creating Sustainable Enterprises and Communities by Susan Witt.

Elizabeth Keen and Alex Thorp farmed at Indian Line Farm for two seasons with the dream of turning a temporary arrangement into a permanent responsibility. The 16.69-acre farm on Jug End Road in South Egremont, Massachusetts, has rich soil, ideal for growing vegetables and small fruits. A white house, large red barn, and several sheds overlook the fields. Jug End Mountain on the Appalachian Trail rises in the south and beautiful mountain views are found to the east. The farm fields about 82 acres of preserved wetlands, a critical part of the Karner Brook ecosystem. Water quality in the brook and wetlands is sustained by public and private efforts which, over the past five years, have protected more than 1,300 acres in the watershed. Keen and Thorp grew organic vegetables to sell at the nearby Great Barrington Farmers’ Market and built a success story on the farm. In 1992, after two years of trying to maintain the $155,000 appraised value. Fundraising could cover up for sale, the two could not afford to purchase the farm. Elizabeth Keen and Alex Thorp farmed at Indian Line Farm were all in poor condition, they realized they would have to sell the farm. Keen and Thorp agreed to purchase the buildings and improvements at no less than 17 acres, a building lot on Jug End Road is considered a prime location for vacation home owners from New York City. Since the buildings at Indian Line Farm were all in poor condition, they would probably be taken down by a vacation home owner and a new house built to take its place. But to farmers, they were worth repairing.

Lease Terms

As a result of the purchase, the Community Land Trust holds title to the land and leases it to Keen and Thorp on a 99-year basis, providing security of tenure. The lease guarantees the lessees ownership of the land while maintaining small-scale market farmland affordable to farmers.

In June of 1999 the Community Land Trust in the Southern Berkshires purchased Indian Line Farm, simultaneously selling the buildings to Keen and Thorp and conservation restrictions to The Nature Conservancy. The lease requires that the buildings remain owner-occupied and not become rental property or vacation homes. It stipulates that the land be farmed, requiring the farmers to continue farmland and farm homes in an affordable manner and developing, harvesting, and marketing—without forcing farmers and actively farmed. The lease is an effective tool for protecting agreed upon ecological, economic, and social objectives.

The lease requires that the buildings remain affordable at resale to the next farmer. The Community Land Trust’s policy is to retain an option to purchase the buildings and improvements at no more than their replacement cost and to resell them at the same price to another farmer. This provision ensures that the value of the land, purchased with community donations, is not included in any sale price.

In addition the farmers must employ organic practices according to the standards developed by the Northeast Organic Farming Association/Mass Chapter. Although the farmers are not required to be NOFA-certified, an inspection clause is included if there is any doubt regarding compliance.

Because the community, working through the Community Land Trust and The Nature Conservancy, has assumed responsibility for financing the land, Keen and Thorp will not be burdened with land debt. They can continue managing the farm business—building soil fertility, planting, cultivating, harvesting, and marketing—without forcing crop production to pay for a mortgage on the land itself. Under such an arrangement, Indian Line Farm remains an economically viable entity and an important part of a network of small regional enterprises.

Each farm is different; the characteristics of the land and the culture of the community require individual solutions when developing a land use plan. At Indian Line Farm, because of the abutting wetlands, The Nature Conservancy wanted the buildings to be limited to their current footprint to prevent more intense use of the site. Lowenstein, a consummate scientist, was also
concerned about placing farm animals on the land because of proximity to wetlands. Keen and Thorp argued that as organic farmers they would need to use manure and that it was best to have a source of it on the farm. Swayed by the argument of farm viability, The Nature Conservancy agreed to animals, with limits.

And so began an interesting discussion. Should the lease restrict the number of animals to four sheep and two cows? What if the farmers later wanted one pig and eight sheep? It would be cumbersome to renegotiate with every change of season. The problem was resolved by placing a limit on the number of animal units in pounds.

Another negotiation dealt with aesthetics. Indian Line Farm is in a vacation-home neighborhood. The neighbors who donated to the farm’s purchase would like to see the exterior of the house painted to meet neighborhood standards; however, painting the house is low on the farmers’ list of things to do. The falling ceiling, plumbing, sagging porch, and interior walls all take priority. The Community Land Trust was able to accommodate the donors because the fundraising appeal brought in enough extra money for painting. Since then, the farm couple has worked hard to clean, repair, and renovate the main house, clear brush on the land, dig a new well, repair the roof of the barn, improve the driveway, and do all the many tasks necessary to raise organic vegetables for local sale. The small CSA group grows as word of the high quality produce spreads around the area. The lease on the land provides all the security and incentives of ownership including the right to pass on the farm to heirs through transfer of the lease. By taking away the burden of land debt, the community land trust arrangement has given Keen and Thorp the opportunity to ply their craft in a manner responsible to the ecological conditions of the site.

The success of this effort has meant that the Berkshire community was able to honor the first Community Supported Agriculture farm in North America, to preserve Indian Line Farm as a working farm, to encourage and make it possible for young people to enter agriculture in the Berkshires, and to serve as a model of community support for small-scale, organic farming.

In October the community of individuals and organizations that worked so hard to save Indian Line will gather together again on the farm, in sight of Jug End Mountain, this time to celebrate the wedding of Elizabeth Keen and Alex Thorp.
Land View Farms: Making the Transition to Organic Soybeans

by Jack Kittredge

The pinelands of southern New Jersey is an environmentally sensitive area. The soils are sandy and ideal for cranberries. The naturally low pH of 3.5 to 4.5 also makes it an exceptional locale for blueberries. Through these sandy soils filters rainwater which recharges aquifers helping supply drinking water to major metropolitan areas on the east coast. Development is thus restricted by an independent Pinelands Commission, and the historic land use has been farming.

Mark Potts, of Pemberton, is a NOFA-NJ certified soybean grower who farms with his father, Herb. Herb recalls the farm he grew up on, which used to be what was called a ‘general farm’: “We would plant maybe a few acres of tomatoes for a local processor, 30 acres of corn for silage for our cows, and most of the land would be in pasture for alfalfa and hay. Every spring we’d get 500 baby chicks. Mother took care of them. That was her egg money. We’d have fried chicken by the Fourth of July, eggs all winter, and then when the new batch started laying the next September, the old ones were stewing chickens. Dad would buy 12 weaned pigs in the spring and that was the job of us kids. We’d mix wheat middlings with water and feed them. When you’d mix that up it looked just like chocolate milk. I never got up the nerve to drink it, but I thought about it! They were ready to kill by late fall. Dad would call this Hungarian friend of his and he’d come out with a couple of friends. He’d slit their throat (saving the blood for blood pudding), burn the hair off them, take the guts out, and then take them back to his butcher shop to cut up and sell. I remember him taking straw, piling it around the pig, and burning the hair off.”

General farms used to dominate here, but even in Herb’s day some had to 60 acres in specialized vegetables. They’d sell them to brokers in Philadelphia. Mark’s grandfather had a stroke in his mid fifties and sold the farm for house lots. Herb has owned several farms since then, mostly doing grain farming. In the 1960s, however, prices got so low he stopped and got off-farm work. Unable to stay away, however, he still did custom farm work. In the late 1970s, Mark bought a combine from his father and began doing custom harvesting himself. His father would help him out after work. It wasn’t much later that that the price of soybeans went up to $7, $8, and then even $9 a bushel. Barley was high, too. Mark and his father decided to try farming again. They did well and pretty soon they were farming 800 acres of rented land. Six years ago Mark bought the farm they are on now. Less than a year ago he sold the farm’s development rights under the state’s Land Use Act. Mark’s soil is a little heavier than traditional pineland soils. It will produce 200 bushels of corn to the acre, but there is a fine silt layer on top that Mark says tends to pack down real hard. Then, when you have rain, the water lays on top of the soil and if you dig down a foot it’s as dry as a bone. So a year and a half ago they bought a subsoiler and subsoiled the whole farm to improve its drainage. Mark also spreads horse manure from local stables and if you dig down a foot it’s as dry as a bone. So a year and a half ago they bought a subsoiler and subsoiled the whole farm to improve its drainage. Mark also spreads horse manure from local stables and then even $9 a bushel. Barley was high, too. Mark and his father decided to try farming again. They did well and pretty soon they were farming 800 acres of rented land. Six years ago Mark bought the farm they are on now. Less than a year ago he sold the farm’s development rights under the state’s farmland preservation program, and now the place is assured of an agricultural future.

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The high grain prices of the late 1970s and early 1980s that got Mark and Herb into farming didn’t last forever. In 1985 the price of beans dropped down to $5.06. But the price of spray materials and equipment kept going up and up. Mark bought a John Deere 4430 tractor, in pretty good shape, for which he paid $14,500. When he got rid of it 12 years later he got the same price for it! The price of new equipment kept going up, too. After a couple of years Potts bought a brand new Holland twin rotor combine for $60,000. He thought that was a lot of money, and says it felt like those $10,000 per year payments were never going to go away. Now a new combine, to replace it, would cost $140,000 to $150,000! There just isn’t that kind of money in farming, Mark asserts.

Mark examines a soy plant’s roots. They are well nodulated with nitrogen-fixing bacteria, and there is only a short space between each trifold branch so that the plant, while short, is fully leafed out.

“Look at what’s happened to gas prices! The government doesn’t seem to mind when gas goes up. But for them to go backwards, how can we stand that?”

He blames the government for a double standard for materials, not counting the spray equipment and getting all the permits. Then if he wants to get good yields, he ends up applying a lot of fertilizer — which can cost up to $100 an acre. But the droughts of recent years held yields down anyway, and Mark just hasn’t been getting back out the money he puts into farming.

“Making the Transition to Organic Soybeans

What finally pushed Mark into starting the transition to organic farming was economics. He says the spray materials used on conventional crops don’t work the way they’re supposed to, so he ends up respraying and it costs him forty dollars an acre just for materials, not counting the spray equipment and getting all the permits. Then if he wants to get good yields, he ends up applying a lot of fertilizer — which can cost up to $100 an acre. But the droughts of recent years held yields down anyway, and Mark just hasn’t been getting back out the money he puts into farming.

“I understand that in France,” he continues, “they get $17 a bushel for soybeans. They protect their farmers in France! They realize the value of their farmers. Not in this country! They’ll be sorry one of these days when they have to import their food like they do their fuel. Then these other countries will tell them how much to pay!”

Making the Transition to Organic

The Natural Farmer, Fall 2000
It's just dried, harvested onto a dump truck, run through a seed cleaner, and bagged and put on pallets. It's just been recleaned, bagged, and put on pallets. It's just treated to get up in that range to be acceptable. And they like the protein from 33% to 38% for tofu. But it's hard to always count on it, he admits. “You never know.”

So I called NOFA,” he continues, “and they sent me the forms and papers. We have several fields that are in their first and second years of transition now, but we had that one farm that could be certified organic right away last year. As it turned out, however, we had a bad drought last year and got only 600 bushels off that farm. That wasn’t enough to shade out the weeds.

As Mark relates it: “The county agent started encouraging us to contact NOFA. ‘You guys are growing this organically anyway. You should get it certified and get more for it.’” he told us. “I didn’t think much about it, but I was talking to a local dairy farmer and he mentioned a dairy farmer in Maryland who was looking for organic soybeans. We called him and he said if we had a trailerload of certified organic soy, he’d double whatever was the current price of conventional beans. That sounded pretty good to us!”

“So I called NOFA,” he continues, “and they sent me the forms and papers. We have several fields that are in their first and second years of transition now, but we had that one farm that could be certified organic right away last year. As it turned out, however, we had a bad drought last year and got only 600 bushels off that farm. That wasn’t enough to shade out the weeds.

Mark figures an average yield for soy in his area, using sprays, is about 35 bushels per acre. But if he gets 20 or 25 bushels to the acre and does it organically without the cost of sprays, he says, he’ll make out better in the long run even at conventional bean prices. If he can get an organic premium, of course, that changes the whole equation. Especially if he gets out of growing soy for animal feed. He plans to get changed over to higher protein beans and sell those beans for tofu. He can tolerate a few weeds if the soy has a good start.

“If you plant later,” Mark admits, “you just suck in your pride and don’t look at the weeds that do come up. We had a really bad year in 1999 when we didn’t have much crop. We put in soybeans because we had run out of time to plant corn, and we got 400 bushels. Last year where there were weeds you aren’t going to get more than 300 bushels. Like I said, you aren’t going to get that 45 or 50 bushel per acre yield without sprays. Maybe if you cultivate you can get 35 or 40 bushels. By not cultivating, broadcasting and spraying, you’re taking a chance on a maximum yield of 33 or 34 bushels. But if it’s real dry those roots haven’t had a chance to get to moister soils so you end up with burnt spots. It’s risky.”

Irrigation could improve Mark’s yield, given the current droughts. Mark knows vegetable growers who put in soy when they run out of time to plant vegetables. On irrigated land they can get 60 bushels per acre. But they have to cultivate each time after they irrigate, and they say it doesn’t pay at $7 or $8 bean prices. Mark priced an irrigation system but it cost $18,000 at the well to get enough water for 25 acres, then the pump was another $15,000, the piping to go on out was another $12,000 and the guns and wheels were $35,000! Mark just figured that was one more of those things he would do when he wins the lottery!
THANK YOU!!

The NOFA Summer Conference Committee would like to thank all the companies who so generously donated food products to the Summer Conference. Their donations help us to provide the delicious food served at the conference in the dining hall and at NOFA Nibbles. We would like to extend a special thank you to:

Northeast Cooperatives for making it possible for companies to donate their products to NOFA, for their own donations and for delivering all the products to the conference;

Stonyfield Farms Yogurt who is extremely generous with their donations – the conference would not be the same without their delicious ice cream; and

Eberly Poultry and Shelton’s Poultry who donated all the organically raised chicken served at our Local and Organic Dinner.

Thank you also to the wonderful staff at the Hampshire Dining Hall (Tedexco Marriott) who work with us in planning the menu and in providing the delicious organic meals served. They are always helpful and courteous and make feeding 600+ people at once look easy.

This year we decided to highlight local and organic agriculture by planning Saturday night dinner to feature only those foods grown in New England. I think everyone who ate that meal will agree that it was great! Thank you to the local farms who contributed produce for this meal.

Brookfield Farm
Drumlin Farm
Justamere Tree Farm
Many Hands Organic Farm
Ol’ Turtle Farm

Following is a list of all the companies who supported NOFA Summer Conference 2000 through their generous product donations. Please keep them in mind when you shop though your food coop or at the grocery store:

Albert’s Organics
Alvarado Street Bakery
American Natural Snacks
American Prairie/Mercantile Foods Co.
Annie’s Dressings
Apple Hill/Mountain Sun Organic Juices
Arrowhead Mills
Associated Buyers
New Mexican Coffee Co. (Avalon Coffee)
Barbara’s Bakery
Big Sky Bread Co.
Bread and Circus
Buckeye Pretzel Company
Butternut Farms Organic Coop
Butterworks Farm
Caffe Ibis Coffee Roasting Co.
California Olive Oil Company
Cascadian Farms
Caillid Seed Co.
Cedarlane Natural Foods
Champlain Valley Milling
Choice Organic Teas/Granum
Coombs Vermont Gourmet
Country Choice Naturals
Damascus Bakers, Inc.
Eberly Poultry, Inc.
Echoes of Summer
Edward & Sons
Equal Exchange
Florida Crystals
Food for Life Baking Company
French Meadow Bakery
Frey Vineyards
Frontier Cooperative Herbs
Garden Spot Distributors
Green Mountain Mills
Honey Garden Apiaries
Kauai Organic Farms
Kettle Foods
Lightlife Foods, Inc.
Living Earth Natural Food Store
Lone Pine Enterprises, Inc.
Lundberg Family Farms
Marty’s Organic
Mediterranean Delights
Mighty Mo Munchies
Miguel’s Stowe Away
Nature’s Path Foods, Inc.
New England Natural Bakers
New Organics Company
Newman’s Own Organics
Northeast Cooperatives
Northeast Cooperative Produce Division
Once Again Nut Butters
Organic Cow
Organic Valley/CROPP Cooperative
Quinoa Corporation
Salem Baking Company
Santa Barbara Olive Co.
Sem-chi Rice Products Corp.
Shelton’s Poultry Inc.
Smucker’s Quality Beverages
Sno Pak Foods, Inc.
Soyco Foods/Galaxy Foods Co.
Stonyfield Farm Yogurt
Stretch Island Fruit Inc.
Sunergia Soy Foods
SunRidge Farms
Table and Vine
Taylors of Harrogate
The Organic Garden
Traditional Medicinals
Trinity Springs Ltd
Tumaro’s Gourmet Tortillas
Turtle Mountain, Inc.
US Mills
Vermont Bread Company
Vermont Gold
Village Cannery of Vermont
White Wave Vegetarian Cuisine
Wholesome Sweeteners
wonderful John Porcino, and the zydaco band. I saw many very happy folks at all these events. And Dave Getman, the master of the coffee house and the fair, pulled off these two relaxed and communal events with great ease.

I need to mention the efforts of Justine Johnson, Barbara Cohen, Dre and Chris Rawlings for a fantastic conference for the children and teens. There were 125 children and 43 teens who had many exciting opportunities with four very energetic leaders, all of whom were new, and all of whom put tremendous effort into upgrading these 2 important aspects of the conference.

Speaking of numbers, there were about 1250 registrants this year. That number has held pretty steady for the past three years now.

I want to thank our food team, Beth Ingham the menu person, Rita Horsey who gets donations of food for all aspects of the conference, and Erin Ames, who coordinated NOFA Nibbles. They kept us happy and well fed all weekend.

Mary Lou Conna deserves extra mention for her now permanent registration signs, her hours of work on the banner that one lucky participant snatched up for $40 and more and better thought-out signage than ever before.

Dennis and Audrey Cronin have been on the committee 6 years now. Without Dennis we would not be able to keep all the presenters in AV, nor keep the keynote on track. Dennis has become our handyman at the conference also. Audrey, in her soft spoken way, very efficiently carries off her task as NOFA table coordinator and helping hands coordinator.

Penny Pitts was essential in the registration tent; Joanne Duros, Leslie Cox, and Ted Conna served the committee and the conference throughout the year.

For the 4th year, Elaine Peterson has managed the registration process for the conference. Elaine’s unflappable composure and eminent patience make her the rock of the conference. Add to that her hours of work on the program book and she has become almost irreplaceable on the Conference committee. Thanks Elaine!

Care to join this marvelous group of people? We will have our wrap-up/start-up meeting on Sunday, October 1 at noon at Elaine Peterson’s house. Give me a call if you would like to participate for 2001 (978) 355-2853. We meet 7 times per year on a Sunday. We have paid and unpaid positions available.

Soap Sculpture proved to be an attractive way to pass a few minutes time.

The Tug-of-War is always an exciting event.

Some of the kids, of course, invented their own games.

The dunk tank was popular with the teens. The sack race is also a perennial favorite.
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**Plans for 2001**

The conference committee has already put in an invitation to William McDonough, eminent ecological architect, to be our keynote for 2001. If he can't make it, our next choice is Cathrine Sneed, prison activist and farmer in San Francisco. The dates for next year are August 10-12 at Hampshire again. If you would like to submit a proposal for the theme and/or logo, please submit something to me so that I have it in hand by October 1 for our conference committee meeting. If we choose your theme and logo, you get a free trip to the conference (all meals, registration and housing) and a free t-shirt. If we choose your logo or theme you get half that.

If you haven’t yet filled out an evaluation for the conference please get it out of the back of the book and send it in. If you would like to present in 2001 give me a call or write your thoughts. Thanks for letting us do such fun work for our “bread money”.

Some excellent performances were given given at the coffeehouse.

John Porcino had the kids spellbound on Saturday night.

Speaking of the kids, they had a great time playing at the Children’s Conference.

The contradance was inside because of the rain, but it was still packed!

A little musical entertainment attracted passers-by during the fair over at the timber-framing exhibit.

Of course the egg toss was also very popular at the fair.
A New Lease on Farmland: Assuring a Future for Farming in the Northeast

The following essay written by staff of the E. F. Schumacher Society was first published in 1990. E. F. Schumacher Society, 140 Jug End Road, Great Barrington, MA 01230, 413-528-1737, www.schumachersociety.org.

Farmland Preservation: A First Step

Here in the Northeast, the last several years have seen a tremendous boost in public awareness of the importance of farmland preservation. With public money in short supply, many local communities, like our own, have taken action themselves by instituting non-profit conservation land trusts. As private, locally based organizations they have been able to act quickly and flexibly to purchase large amounts of farmland as it comes to market, preserving it for future generations. This is a major accomplishment.

If you are a member of a land trust, you and your organization are undoubtedly aware that in spite of this effort, farming in the Northeast continues to decline. Probably you have seen that buying development rights or other legal means of preventing building on farmland in your area has not necessarily guaranteed that it is farmed. Preserving farmland is an important first step to encouraging a solid regional agricultural base; but it is only a first step.

As organizations actively working with ecologically conscious farmers here in the Northeast we are concerned about this decline. We have considered the problems associated with preserving farming and would like to share some ideas for ensuring the full productive and responsible use of farmland that you have helped and are helping to conserve.

Farming's Changing Nature in the Northeast

To preserve farming is not necessarily to preserve farming as it has existed over the last half-century in this region. Changing demographics and new understanding of the needs of people and the soil have created constraints and opportunities that will determine the complexion of our farm population and our farmland into the next century. What might a sustainable agricultural community look like in the near future?

Resource Conservation

Clearly, agriculture in the Northeast will have to continue to protect and enhance the soil, water and human resources that make food production possible. Farming methods that do not result in ground water contamination or soil erosion, but improve soil fertility and water-holding capacity over time, require large investments of time, material, and husbandry on the part of a good farmer.

Diversity

A farmer dependent on one crop may be forced economically to take drastic measures to save the crop from pest infestation or weather conditions, even at the expense of sound stewardship of the land and natural resources. Sound resource conservation, on the other hand, will require diversity. Crop diversity can sustain partial failures of some crops in order to preserve the integrity of sustainable farming practices.

Diversity means smaller yields of multiple crops rather than large volume in one crop. The milk truck cannot afford to make its way along a long bumpy dirt road for only a few hundred pounds of milk. The new Northeast farmer will have to identify varied, smaller markets, close to the farm.

Smaller Scale Farms

In the more urban areas of the Northeast, populations continue to grow. The results of this growth are that in some areas, more land will be needed for housing, manufacturing and recreation and less will be available to the farmer. The neighbor’s pasture where the heifers have always been kept may be sold to the condominium developer.

(continued on next page)
The need for farmland preservation efforts in these areas will be acute. Even after the purchase of development rights or other forms of restriction the cost of land purchase may remain high, perhaps prohibitively so for a farmer requiring large amounts of acreage.

New Markets

On the other hand, growing Northeast population centers also promise new opportunities for direct marketing of crops, which for many farmers is the critical edge that sustains an agricultural enterprise. The smaller grower using little or no dangerous chemicals can produce a high quality product on few acres with minimum adverse impact on non-farming neighbors.

Already a newly health conscious public is demanding more healthful, higher-quality food. They want to know that it was grown without polluting the environment. They want to know that it is fresh, and that non-renewable fossil fuels have not been extracted and burned in order to transport it over a large distance.

Perhaps most importantly, it is clear to the public that buying food locally can have a direct effect on the quality of the scenery in the area. They understand that when they buy from a local farmer, they are helping to preserve the rural character of the landscape and the neighborhood.

A Longer Vision

The requirements for producing food for these new markets are the same as those for producing food in an ecologically sensitive manner that conserves land and natural resources. The new Northeast farmers will run smaller, more diverse, more labor intensive farms. They will pay careful attention to the health of available soil and water resources.

This kind of farming requires longer-term planning than that to which we are accustomed in other business plans, even in most farm business plans. A five year agreement is a significant commitment in some kinds of enterprises, but to a true steward intent on bringing the land to full health, a process that might last a lifetime or several lifetimes, five years is merely a beginning.

Farmers’ Changing Nature in the Northeast

Many of the young farmers in the Northeast today will not take over the family farm from their parents. They may not have grown up on a town in which they farm. Many will not have grown up on farms at all.

Today’s ecologically conscious farmers are often a generation or more removed from the farm. They read the work of Wendell Berry, are active members of the Northeast Organic Farming Association, or have trained in sustainable agriculture techniques at places as Wes and Dana Jackson’s Land Institute or the New Alchemy Institute. They are thinking globally and acting locally by producing food in the best way they know how.

Like the individuals and institutions working at the cutting edge of today’s agricultural issues, the new farmers are broadly educated and have non-farming career options. They have chosen farming, and they therefore can and must be choosy when they embark on an agricultural enterprise. They will only commit themselves if they feel they can succeed both ecologically and economically.

Their Situation

Today’s new farmers are likely to be in their thirties and looking to establish a home and a family. They need security in their home and on the land in order to build a livelihood and a life.

Part of their security is in their own skills and expertise. In order to run a business, they need the independence to operate as they see fit, within a structure that secures the land from damage by ill use. Often they have capital, and are looking to invest it in their future. As business persons they expect a return on that investment.

If we in the Northeast are to preserve farmland for future generations, we need to satisfy the needs of these farmers. They have the skills, the knowledge, and the passion both to farm well and to make a living at it. They are the people who can maintain and improve the farmland you preserve, but they need help.

A New Lease on Farmland: Responding To Change

Conservation land trusts in the Northeast have been eager to attract such environmentally concerned farmers for their farmland. As organizations depending on volunteers they frequently resort to a simple short term lease and expect that one of their members will drive by and see that the field has been cut.

Short term leases can invite short—sighted farming practices. Without incentive to plan for future generations, a farmer as a businessperson in a highly regulated market environment may have to force the highest quick yield without adequate attention to the health of the soil.

If owners of farmland in the Northeast are to attract and retain the ecologically committed farmer, they must be prepared to offer farm leases that incorporate long range concerns.

Partnership

The land, the farmer and the community (represented by a conservation land trust) all can be equal partners in a carefully developed long term lease of farmland. By taking the time to prepare a thorough land use plan for a farm and clarifying such use in the written lease, the conservation land trust can retain enough control to assure that the land is improved instead of degraded or left fallow, and the farmer can be given enough flexibility, independence and security to make crucial business decisions while farming in a sustainable manner. There are several critical elements to a farmland lease that will make it possible for a farmer to farm responsibly.
The land use plan includes a careful analysis of the soils and terrain and possible water sources on a piece of farmland, as well as existing farm and residential buildings. It would most likely divide the land into different sections depending on these natural conditions and would suggest upper and lower limits to the intensity with which the lease would allow each of these sections to be farmed.

Most intensive might include an organic market garden, while least intensive might require that the field be mowed at least once a year. Permitted tillage methods might also be delineated in a land use plan.

The land use plan would also specify where residential and farm buildings could be located. The placement of buildings would relate the residential and farm needs of the farmer in a way that minimizes their adverse impact on the agricultural land and on neighbors as well. Buffer zones designed to minimize the impact of all farm activity on neighbors would be designated in the land use plan.

The land use plan is not a farm plan, which is the business of the farmer and the investors in the farm enterprise. It is a statement by the farm owner of the conditions under which the land can be used. If a conservation land trust is working with a farmer regarding a piece of farmland, it is important that the farmer’s input is included in the land use plan. But the prime responsibility of developing a land use plan rests with the lessor. A farmer considering a lease can then quickly evaluate whether or not the land’s potential, as defined by the landowner’s, will address the farmer’s interest.

Once committed, the farmer is free to change a business plan as local markets change without renegotiating with the land owner. The framework is provided by the land use plan to protect the natural resources of the land, but the farmer is independent within that framework.

Financials

A long-term lease gives the farmer the security of a lifetime lease. For example, commercial banks and credit unions offer long-term leases that provide for ownership of improvements at resale. A non-profit, locally based membership organization they serve geographical areas similar to those of conservation land trusts. They work with organizations they serve with the landowners through the lending of capital or the guaranteeing to lenders that loans that would not otherwise get made. They have also developed new ventures to encourage as much self-management as is appropriate in order to lower costs for and maintain the independence of those leaseholds.

Alternatively, a conservation land trust might consider forming its own community land trust as a separate but related organization. The land trust should have the number of productive farm leases represent a significant part of the income and activity of the land trust. Those parts of the land donated to the land trust that are productive farm land could be turned over directly to the community land trust for management. Any lease income on the land over and above the amount needed to cover the conservation land trust to establish a pool for purchase of additional land.

The Community Land Trust in the Southern Berkshires in Great Barrington, Massachusetts and the New England Small Farm Institute in Belchertown, Massachusetts are being established and continued to refine lease agreements particularly for agricultural land. Either of these organizations may be contacted for information or consultation.

In Summary

The preservation of farmland for productive agricultural use will require an active commitment and responsibility to long-term land management. It will mean working with leaseholding farmers through changes in farm practices, changes in farm markets, changes in human circumstances.

As a local membership organization, a land trust has the resources, knowledge and capability to best provide the benefits and opportunities over time necessary for land management. It may well be up to you to help develop anew form of financing and marketing for this new kind of farm and farmer if your farmland is to be actively farmed. Your members, already committed to farmland preservation, may at the same time be interested in an investment in their own food supply through the lending of capital or the guaranteeing to purchase a percentage of the farm’s produce.

Revolving Loan Fund

The Fund for Affordable Housing in Great Barrington, Massachusetts, for example, is a low-interest loan fund that accepts investments from local investors, paying them interest equal to the rates of small passbook savings accounts. It loans these funds to first home buyers at a rate just above the interest paid in investors. Many of the investors in this case are vacation home owners (an important but often neglected resource). In the same manner, local farming could attract investors to such a fund for affordable housing.

Loan Collateralization Fund

The Self Help Association for a Regional Economy in Great Barrington, Massachusetts pools small farmers in individually-owned passbook savings accounts at a local bank. The owners of these accounts-SHARE’s members-agree that the funds be used only to collateralize other businesses that cannot otherwise obtain financing. Members form committees to review and accept or reject collateralization requests. The bank charges 4% for administering the loan, but takes no risk. Members earn 6% on their accounts. The total cost of the loan to the borrower is 10%, about half the cost of conventional financing.

SHARE has collateralized loans to farmers for equipment, seed and building improvements.

(continued on next page)
Self-Financing Mechanisms

With the help of SHARE, two farm stands in Great Barrington, Massachusetts have jointly issued a voucher or coupon which they sell in the late fall when cash is short and redeem in the summer when cash flow is greater. Called a "Berkshire Farm Preserve Note," it is redeemable for $10 worth of farm produce at either stand redeemable for $10 discount for $9, effecting a low-interest short-term loan from the customers to the farmers.

When a similar self-financing program began at a local restaurant, the notes were accepted as cash at a Main Street record store, and by several non-profit organizations in payment for membership fees, adding to the incentive to buy them.

Community Supported Agriculture

In the Community Supported Agricultural model, a committed consumer group takes all of the financial risk of the farm. They calculate a budget in order to divide among the membership and pay in advance the entire cost of production for the season. The farmer is paid a salary, and the consumer group takes home the harvest each week, whether bumper crop or failed crop.

The Return to You

The success of these local financing and marketing programs will depend on the success with which the local community feels identified with its farms and farmers. You can build that identification through articles in your newsletters to members, through the sponsoring of farm celebration days, through work days at planting and harvest times. This kind of participation and celebration will in many ways foster a sense of pride and identification with one's local farm. It has been proven that the success with which the local community feels identified with its farms and farmers.

People, Land, and Community

Your group knows that the health and character of the community is inextricably associated with the health and character of the land. Restricting the use of certain scenic or environmentally sensitive parcels is critical to maintaining the quality of life in rural areas. Farmland preservation implies active use of the land, use in the best sense. The land must be farmed in an intelligent and ecologically sensitive manner that improves the quality of the soil and water and maintains open space in a non-polluting, productive working landscape. To assure such use requires more than restrictions. It takes positive encouragement in the form of affordability and long term security of tenure and investment. The farmer is paid a salary, and the consumer group takes home the harvest each week, whether bumper crop or failed crop.

Perhaps most importantly, farmland preservation requires the patterns of mutual responsibility that constitute local culture. Ultimately, preserving farmland is about preserving community. The social and economic forces that affect both must be taken into account. Only in this way can we maintain the complex web of connections between people and the land that sustains both.

“...if we conceive of a culture as one body, which it is, we see that all of its disciplines are everybody’s business...To such a mind it would be clear that there are agricultural disciplines that have nothing to do with crop production, just as there are agricultural obligations that belong to people not farmers.

A culture is not a collection of relics or ornaments, but a practical necessity, and its corruption invokes calamity. A healthy culture is a communal order of memory, insight, value, work, conviviality, reverence, aspiration. It reveals the human necessities and the human lives. It clarifies our inescapable bonds to the earth and to each other. It assures that the necessary work is done, and that it is done well. A healthy farm culture can be based only upon familiarity and can grow only among a people soundly established upon the land; it nourishes and safeguards the human intelligence of the earth that no amount of technology can satisfactorily replace.”—Wendell Berry

The Unsettling of America: Culture and Agriculture

Nutrition and Physical Degeneration

by Weston A. Price, D. D. S., published by the Price-Pottinger Nutrition Foundation, 5871 Cajon Blvd., San Diego, CA 92115 431 pages, $39.95 plus $6 s&h (California residents add $3.10 tax) reviewed by Mary Paulson

After spending many years fixing bad teeth and wondering why they were bad, Dr. Price traveled the world looking for isolated people who had good teeth and found out why they were good. With the help of local governments and schools, he examined the teeth of the people. He found that wherever isolated groups ate native foods, they had a high degree of dental health as well as general health. In the first generation after adopting commercial, refined food, less isolated groups had bad teeth and other degenerative diseases.

In the Leutschental Valley in Switzerland, the people ate cheese and rye bread, meat once a week, and fresh milk of goats and cows. While the men and boys harvest the hay and rye, the women and children go with the cows to the high pastures to make and store cheese for winter. They use limited garden products. Dr. Price arranged to have samples of food and hay sent to him for analysis. They were found to be much higher in vitamins and minerals than in Europe and the United States.

In the Outer Hebrides, Northwest of Scotland, iso-lated people ate fish, oats and barley. They had ex-cellent health. Those less isolated, who had access to refined food products, had much tooth decay and TB.

The primitive Eskimos had excellent health as long as they remained on native foods including large sea animals, salmon, seal oil, fish eggs, caribou, ground nuts, kelp, berries, and certain inner layers of whale skin (high in vitamin C.) But again, in the first generation after adopting commercial, refined food, they had bad teeth and other degenerative diseases.

Dr. Price also visited and examined South Sea Islanders, North and South American Indians, Aborigines and several African tribes.

The causes of degeneration are the same everywhere. When Industraiism developed and things were made for profit instead of the common good, the good of the thing was sometimes sacrificed.

Besides the invaluable information for us from the many examinations all over the world, the book contains over 130 photographs of healthy and unhealthy people, especially their teeth.
Ward Sinclair was a respected newspaperman who retired to his dream of owning a small organic farm. This is a compilation of the stories he wrote about his place, “Flickercone Mountain Farm & Groundhog Ranch” in Pennsylvania, as an occasional column in the Washington Post from 1989 through 1992. Many NOFA members will recognize themselves in him—searching after a less stressful life, willing to work hard and learn, most satisfied when simply present in Nature’s workshop.

The essays are short and reflective, usually focused on one aspect of running a farm. Although I was somewhat put off by his way of referring to himself in the third person as “the farmer,” I was too captivated by his prose not to read many pages. Here are a few samples of his style.

**On setting help:** “In the beginning, when the truck patch wasn’t much more than an oversized garden, life was simple. The farmer and his trusty accomplice, Peterson, divided the labors according to interest and ability, and worked until the chores were done.

But in time, it became too much. Too many weeds to pull, too many beans to pick, too many lettuce seedlings to transplant, and it was clear that help came to the truck patch to the mystical world of personnel management.

Peterson [Sinclair’s partner Cass Peterson] and the farmer agreed on some basic points. The pay would be competitive or better; no worker would be asked to do a task that the farmers themselves would not do; ample breaks and rest would be insisted upon; the most onerous jobs would be reserved for the farmers; assignments would be varied constantly to avoid boredom.

However reasonable that might appear on paper, the reality turned out to be different. A parade of workers—some excellent, some terrible—has come and gone through the truck patch and the thought of a farm suddenly without a work force nagged the farmer constantly.

The recommended young housewife in need of money came to work one day and performed capably and with promise. Then she vanished, sending word through a third party that she was four miles away and could not afford the gas to come here.

A strapping young man knocked on the door another day, begging for a job and bragging about his endurance. He missed his first day of work because he “misunderstood” the starting time.

On the second day, despite rigorous instruction in hoeing, he whacked off scores of valuable lettuces painstakingly transplanted by hand. He missed his third day because of a pimple behind his ear that he feared to be cancerous. He missed his fifth day because his car had to be inspected. He missed the fourth day because he wanted to pick up his prom tuxedo. He couldn’t work Fridays because they were reserved for his girlfriend. For one reason or another he missed a string of Saturdays and the farmer thought he let him go.

A teenage girl worked all one summer and looked eagerly to weekend duty in the fall, a time when more hands are vital in the truck patch. But she could not afford the gas to come here.

She vanished, sending word through a third party that she was four miles away and could not afford the gas to come here.

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The farmer may make too much of this, but later the year has revealed new insights and so at this time of giving thanks, the farmer bow in considerable awe to the combination of forces of man and nature that have led him to his new wealth.

This has been a year of revelation, for the farmer has learned the folly of counting bottom lines in dollars and cents. How can he place a value on nature’s purity, on the workday drudgery, which in the truck patch means much time on hands and knees.

In the formal sense, the farmer is not a man of religion. But the year has revealed new insights and so at this time of giving thanks, the farmer bow in considerable awe to the combination of forces of man and nature that have led him to his new wealth.

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Thus, the farmer began to fully realize what other farmers have known for centuries. In order to survive, the farmer must have skills that go well beyond knowing only the tricks of nurturing a plant to lush maturity. He must be, among other things, carpenter, plumber, electrician, roofer, engineer, architect, engine mechanic, cement finisher, and drainage designer to make the farm run smoothly and to provide all the accouterments required by his lettuce seeding.

It can be reported that the new greenhouse, after many clobbered thumbs and mis-cut 2-by-4s, rose to completion in time to receive the first seeds of early lettuce, broccoli, and cabbage. It may turn out to be airtight and possibly stable enough to endure fierce wind.

If you enjoy reading about the realities of farming in the northeast, both embarrassing and ennobling, Ward Sinclair’s honest observations in Truckpatch will transport you — down to earth!
In Memoriam…


Susanne had raised her two daughters as a single parent, saw them settled with families of their own, and then, satisfied, looked for other challenges. It was NOFA-NH’s great good fortune that she found us. Susanne came on the Board of Directors at a difficult time. When some were starting to fade and others were bogged down with personal issues, she came with enthusiasm, needed skills, and good advice. Her ability and comfort with computers and her organizational abilities were invaluable to NOFA-NH. Susanne was also a skilled gardener who was absolutely committed to organics. She had just begun to clear land for a market garden on her property in Epsom — I’m sure it would have been wonderful. Please join me with blessings and thanks to Susanne. Hold her and her family in the light.

Dan Holmes, president, NOFA-NH
Calendar

**Friday, Sep 15 - Sunday, Sep 17:** Conference on Community, Nature & Spirit at Antioch NE Graduate School, Keene, NH for more info (603) 357-3122 x300

**Sunday, Sep 17:** NOFA/RI Tour of Baby Greens operation at River Farm, N. Kingston, RI for more info (401) 461-7999

**Friday, Sep 22 - Sunday, Sep 24:** Common Ground Country Fair, Unity, ME. For more info (207) 568-4142

**Saturday, Sep 23 - Sunday, Sep 24:** New England Heritage Breeds Conservancy’s 3rd Annual Exhibition & Sale of Heritage Breed Livestock, Pittsfield, MA for more info (413) 698-2044

**Sunday, October 1:** Seed Saving Technical Workshop for Farmers, Wolcott, VT for more info (802) 434-4122

**Saturday, Oct 14:** Biodynamic Preparation Workshop with Mac Mead and Gunther Hauk, Chestnut Ridge, NY for more info (845) 352-5020 x20

**Sunday, Oct 15 - Wednesday, Oct 18:** New England Greenhouse Conference, Worcester, MA for more info: (860) 872-6596

**Friday, Nov. 3 - Sunday, Nov. 5:** Carolina Farm Stewardship Association’s 15th annual Sustainable Agriculture Conference, Wilmington, NC for more info: (919) 542-2402

**Saturday, Nov 4:** Composting and Soil Science Workshop, Chestnut Ridge, NY for more info (845) 352-5020 x20

**Friday, Nov 10 - Sunday, Nov 12:** Biodynamic Farming and Gardening Association National Conference, Montpelier, VT for more info (802) 516-7797

**Friday, Nov 17 - Sunday, Nov 19:** 16th Annual California Farm Conference, Santa Rosa, CA for more info (530) 889-9206

**Wednesday, Jan 24 - Saturday, Jan 27, 2001:** 21st Annual Ecological Farming Conference, Asilomar, CA for more info (831) 763-2111

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You may join NOFA by joining one of the seven state chapters. Contact the person listed below for your state. Dues, which help pay for the important work of the organization, vary from chapter to chapter. Unless noted, membership includes a subscription to The Natural Farmer.

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**Virginia**

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**NOFA Interstate Organic Certification Committee**

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**NOFA Membership**

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**New Hampshire**

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* indicates co-chair

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**Vermont**

* indicates co-chair

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**Register for more info:**

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**Organizations in the region.**

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**Give a NOFA Membership! Send dues for a friend or relative to his or her state chapter and give a membership in one of the most active grassroots organizations in the region.**

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Kathie Arnold with some of the cows in her transition herd at Twin Oaks Farm. The older cows are the ones with the docked tails — which was done for convenience while milking when the herd was conventionally managed. The younger ones — those with full tails — were born under organic management which prohibits docking.

News, features, and articles about organic growing in the Northeast, plus a Special Supplement on the Transition to Organic