

THE CULTIVATOR

NEWS FROM THE CORNUCOPIA INSTITUTE

FALL 2014

Eye in the Sky

Cornucopia's Aerial Photography Investigates Factory Farm Cheating

BY WILL FANTLE

When The Cornucopia Institute was founded in 2004, a primary goal of the fledgling organic watchdog was to draw attention to and rein in abuses from the rise of factory farm confinement dairy operations in organic agriculture. Not only were these industrial-scale operations squeezing out the opportunity for family farmers to make a real living in organics, they were also cheating consumers who thought they were purchasing a healthy food produced humanely with sustainable practices.

Cornucopia's spotlight focusing on the scofflaws and abuses led to the loss of organic certification for several operations, as well as to the creation of a farmer and consumer drive that ultimately won the passage of new regulatory benchmarks for pasturing for dairy herds and other ruminants. Yet confinement-style factory farms, like a stubborn weed, persist in organic agriculture. These giant operations have become widespread and dominant in egg production, and continue to produce a significant amount of the organic milk.

Regulators at the USDA have been asked how these operations can be considered to comply with federal organic law. "The head of the USDA's National Organic Program, Miles



The Cornucopia Institute

Chino Valley's poultry operation in Texas is estimated to confine hundreds of thousands of laying hens in barns that appear to offer little, if any, outdoor access, as required by organic law. Cornucopia has captured hundreds of images of massive "organic" livestock operations in 12 states (and counting).

McEvoy, told me he had personally visited some of the huge complexes located in Texas that we photographed," says Mark Kastel, Cornucopia's Senior Farm Policy Analyst. "And," continues Kastel, "he further told me that, and I quote: 'all the farms we visited in Texas were in compliance.'"

"Obviously, Mr. McEvoy and The Cornucopia Institute have a starkly different interpretation of the organic regulations and enabling legislation passed by Congress," Kastel adds. "And the majority of the organic community shares Cornucopia's interpretation."

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Another Bee-Friendly Burg

Minnesota City Becomes Third in the U.S. to Ban Neonics

BY ELIZABETH WOLF

Shorewood has become the first city in Minnesota to pass a resolution to become a “bee-safe” municipality. The Minneapolis/St. Paul suburb follows in the footsteps of Eugene, Oregon, and Spokane, Washington, in banning certain pesticides and encouraging the planting of bee-friendly plants. A neighborhood in Boulder, Colorado, also pledged this year to become a bee-safe locality, as has the campus of Emory University in Atlanta, Georgia.

Springtime used to be the season when Minnesota bee colonies flourished on wildflowers, dandelions, and the sweet clover and alfalfa farmers once grew. It’s what made Minnesota one of the top five honey-producing states in the country. But in the span of a couple decades, GMO monocropping has transformed the state’s central landscape into a flowerless one with few sweet spots for bees.



Conventional corn and soybeans dominate agriculture in Minnesota, as in much of the Midwest. The endless fields don’t need bees for pollination, but that hasn’t stopped the crops from hurting the state’s honey bee population. Like California and other states, Minnesota is coping with massive annual bee die-offs and, in the past decade, the state’s honey production per hive has plummeted by one-third.

The main culprit, according to an increasing number of scientists and beekeepers, is a class of pesticides used to coat over 95% of the corn and soybean seeds planted. Called neonicotinoids (“neonics” for short), these pesticides are made from synthetic nicotine and were developed in the mid-1990s. Today they are the most widely used insecticides in the world.

A single kernel of corn with a high level of neonicotinoid seed treatment contains enough active ingredient to

kill 80,000 honey bees. Neonics are harmful not only to bees and other pollinators but also to birds, earthworms, aquatic insects and other beneficial insects.

“Research is voluminous linking neonicotinoids to bee memory loss and learning, weakened immunity, developmental injury, impaired foraging, diminished navigation and homing ability, and the loss of reproductive production of bumblebee queens,” explains Dr. Linley Dixon, Farm and Food Policy Analyst with Cornucopia.

The European Union passed a continent-wide ban on certain neonicotinoids in 2013. Bayer CropScience, the largest manufacturer of these insecticides, continues to insist that they are safe for bees.

Honey bee pollination, responsible for one in three mouthfuls of food we eat, is estimated to be worth \$215 billion annually. Some would call the work of these industrious insects priceless. ☺

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CONTACT US
The Cornucopia Institute
P.O. Box 126
Cornucopia, WI 54827
www.cornucopia.org
608-625-2000
cultivate@cornucopia.org

STAFF

Mark Kastel, Codirector & Senior Farm Policy Analyst
Will Fantle, Codirector & Director of Research
Pamela Coleman, PhD, Farm and Food Policy Analyst
Linley Dixon, PhD, Farm and Food Policy Analyst
Rebecca Thistlethwaite, Farm and Food Policy Analyst
Gayle Nielsen, Membership Coordinator
Therese Laurdan, Membership Assistant
Melody Morrell, Data Analyst and Research Specialist
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Celeste Gibson, Accountant, HR Manager
Jeremy Vossman, Webmaster

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Elizabeth Wolf, Editor
Tim J. Hill, www.drafthorsestudio.com, Newsletter Design
Special thanks to Steven McFadden.

10 Years, 10,000 Members & 100,000 on Facebook

Cornucopia in 2014: The Power of the Organic Farmer–Organic Eater Connection

COMMENTARY BY MARK A. KASTEL

Some of our members have probably heard me say this before: Farmers have no clout in Washington or the marketplace. With less than 2% of our population engaged in production agriculture, after the presidential candidates get done kissing the rear ends of the ethanol lobbyists in Iowa during the primary season, you will never hear about food or farming again.

But organics is different. Although farmers continue to make up the base of our constituency and membership, Cornucopia's secret weapon is partnering with millions of our urban-allies who passionately care about the quality and authenticity of their food and are willing to stand with farm families they respect.

Most of you who receive this newsletter are financially supporting our mission at Cornucopia. You have our sincere thanks. The remaining recipients, generally staff or board members of other nonprofits, have complimentary subscriptions because we appreciate their service to the organic community.

It's hard to believe it was 10 years ago that Will Fantle and I co-founded The Cornucopia Institute, in response to the increasing corporate encroachment upon and erosion of organic values. While we are celebrating our anniversary, I thought I would mention a few incremental successes we've had lately:

Organic Labeling Deception

In August, the USDA, four years after receiving a formal legal complaint from Cornucopia, agreed that companies using the word "organic" in their brand name, prominently on their packaging, but not selling certified organic food, are misleading the public. This will force companies like *Newman's Own Organics* to discontinue their deceptive marketing practices.

Removing Carrageenan from Organic Food

Congress charged the National Organic Standards Board (NOSB) with reviewing all synthetic and non-organic materials used in organics to make certain they don't endanger human health or the environment and that they

are essential to organic production. However, this process has been corrupted by corporate money and lobbyists. But Cornucopia is making headway.

Recently, WhiteWave Foods (formerly Dean Foods' branded product division) announced they would pull the dangerous food additive carrageenan from their Horizon and Silk products over the next two years. Carrageenan is a derivative of red seaweed that independent research has shown causes intestinal inflammation and even cancer in laboratory animals. WhiteWave now joins a list of other organic marketers who lobbied for carrageenan's use but who have acquiesced after being pounded with questions by their customers.

The Cornucopia Institute will petition the NOSB to remove carrageenan from all organic food.

USDA Enforcement

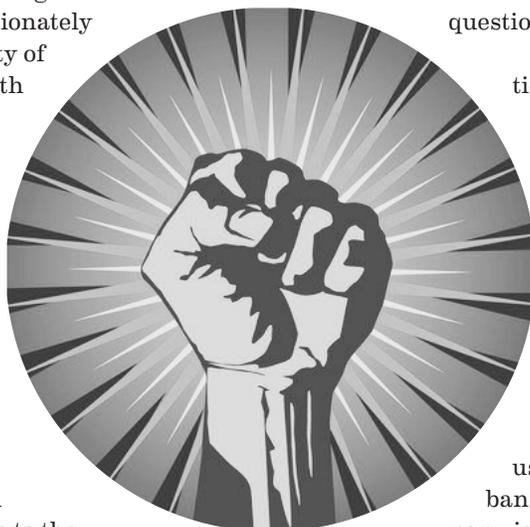
Unfortunately, the records of the Bush and Obama administrations have been uneven when it comes to cracking down on organic scoff-laws. As an example, six years after filing a complaint on the 16,000-cow Shamrock Dairy in Arizona, and three years after the USDA informed us that they upheld our allegations and banned Shamrock from organics, the company is still selling milk and appealing the USDA's findings. Shameful.

At the same time, we need to give the USDA credit when they are executing their duties as Congress intended.

When one of our "intelligence agents" (members) informed us that organic cows waiting to be auctioned off in the San Joaquin Valley of California, were being fed conventional feed, USDA investigators intervened and shut down the auction before it could even happen. Good for them!

More recently, when another intelligence agent let us know that a Saskatchewan, Canada farmer, Bob Thomas, was applying banned agrichemicals on "organic" crops bound for the U.S., his organic certification was, likewise, suspended. (No word on any monetary fines.)

Our power comes from you—a unique farmer-consumer coalition. With your help, we will continue to fight, over the next 10 years, to help maintain the integrity of organic farming and food production. ☺



Protecting Organic Seed Integrity

Understanding and Reducing Contamination Risk

BY PAMELA COLEMAN, PhD

Organic seed should be free of genetically engineered (GE) DNA, because organic regulations prohibit genetic engineering. Unfortunately, organic crops are threatened by inadvertent contamination from GE crops. In response to the threat, the Organic Seed Growers and Trade Association (OSGATA) published *Protecting Organic Seed Integrity: The Organic Farmer's Handbook to GE Avoidance and Testing*.

Although the workbook itself is geared primarily to seed growers, consumers will be interested as well, because the integrity of our seed supply is important to all of us. Contamination of seed planted by organic farmers will result in GE DNA in organic food and feed. This causes an economic loss for the individual farmer, when buyers refuse to purchase contaminated crops. Contamination on a wider scale can destroy the genetic purity of seed varieties used by organic farmers.

OSGATA membership voted on and approved this policy to protect the organic seed supply: "GE contamination of organic seed constitutes irreparable harm to the organic seed industry and undermines the integrity of organic seed. Any detectable level is unacceptable."

How do crops become contaminated?

During the growing season, pollen from a GE crop can travel long distances and pollinate organic crops. To help prevent this, seed companies require a minimum separation distance between organic seed crops and conventional crops. Organic seed corn, for example, should be at least two miles from any plantings of conventional corn.

During planting and harvest, GE seed can be mixed with organic seed, if the equipment is not thoroughly purged of conventional seed before it is used for organic seed. Commingling can also occur after harvest, during transport and storage of the harvested crop.

Long after a crop is harvested, a reservoir of GE DNA can exist in volunteer plants that sprout the following years, or weedy relatives of the crop that were cross-pollinated with the GE crop.

Why is contamination a threat?

The spread of GE DNA can happen quickly. For example, within a year of the release of GE alfalfa, contamination was found in the non-GE plantings of alfalfa.

Possible sources of GE contamination can be difficult to identify. For example, test plots of unapproved GE crops can be a source of unknown and unsuspected GE DNA. Before crops are deregulated and commercialized, they are field tested at undisclosed locations. More than 8,000 field trials have been planted, throughout the U.S., often near seed-producing areas. Since the location of the test plots is secret, farmers may have no idea that a new experimental crop being tested near their farm is contaminating their organic crop.

Genetic contamination may be impossible to detect, particularly if the source is test plots of a new variety that has not yet been approved. Testing for GE crops is based on detecting the novel DNA that has been inserted, or the proteins made from that DNA. Testing laboratories can use DNA sequences of the approved, deregulated crops, but they do not have access to the DNA sequences of unapproved varieties being grown in field tests.



Anasazi sweet corn. Corn is especially at risk for GE contamination as its pollen moves long distances.

Since laboratories can only test for known DNA sequences, they may be unable to detect contamination that occurs from crops in test plots.

Proximity to GE crops may be unavoidable. After GE crops are commercialized, they may be grown anywhere, even near seed crops, and farmers who grow them are not required to notify their neighbors. Although organic seed corn should be isolated from GE corn by a distance of two miles, conventional growers have no responsibility to maintain this isolation distance from organic farms.

How can risk be mitigated?

Growers of organic seed crops are taking a proactive stance to prevent contamination. They're educating themselves about the sources of contamination, how to detect it, and how to prevent it. Growers are implementing management practices, and testing their own seed crops to verify seed purity.

Consumers can support these efforts by purchasing organic food and garden seeds. This is particularly important for corn, canola (and canola oil), soybeans, beets (and beet sugar), and squash.

Without action, organic seed, the foundation of organic agriculture, could be permanently contaminated with GE DNA. The integrity of the organic food system is vitally important, not only to organic farmers, but to all of us. ☺

Building Bridges

The Strategy of NOSB Chair Jean Richardson

BY ELIZABETH WOLF

If the USDA can make radical changes to the National Organic Standards Board (NOSB), without seeking public comment, under a *friendly* administration, what could happen to the citizen advisory body mandated to protect organic integrity under an *unfriendly* one?

That's the question on Jean Richardson's mind as she takes the helm under the new changes imposed on the NOSB by the National Organic Program (NOP). Last fall, the USDA unilaterally reversed the "sunset" policy by which synthetic, non-organic materials are reapproved for inclusion on the National List. Now, rather than automatically dropping off, every material will stay on the list unless the board moves to delist it. The USDA also re-emphasized the NOSB as a purely advisory committee, when it had been created as a permanent body with statutory authority.

"We don't want to end up with a rubber-stamp NOSB," says Richardson, who will chair the board for the first time at the fall meeting, October 28–30 in Louisville, Kentucky. The USDA's power grab has been widely criticized by the organic community, including by the authors of the Organic Foods Production Act of 1990 (OFPA), Vermont Senator Patrick Leahy and Congressman Peter DeFazio of Oregon.

As NOSB chair, Richardson's strategy is one of unity. "We're so small, the more we can work as partners, the better for organics," she says. Just how small is organics? Of the USDA's total 2014 budget of \$146 billion, the NOP gets 0.006%. On this budget of \$9.04 million the NOP is charged with providing oversight of an industry forecast to reach \$40 billion in 2014. The NOSB's share of the NOP budget is a paltry \$190,000.

Richardson brings a surprisingly varied background to the NOSB. Born and raised in Northumberland, the rural, northernmost county of England, she came to the U.S. to pursue graduate studies in biogeography at the University of Wisconsin–Madison, followed by reading law with the State of Vermont. An organic inspector, Richardson is Professor Emerita of Natural Resources at the University of Vermont and consults on rural land use planning. She also works with her family on their certified organic maple syrup operation. The ten-year rural development project she directed helped establish farmer-run organizations that continue today. A Clinton appointee to the Commission on Environmental Cooperation with NAFTA, Richardson currently serves on Vermont's District Environmental Commission.



Dr. Richardson was appointed to the NOSB in 2012 in one of the three "Consumer/Public Interest" positions. In May she was elected chairperson for a one-year term.

Richardson takes a broad view of the changes forced upon the NOSB by the USDA.

"I taught environmental law to scientists and environmental science to lawyers. I can see both sides," she notes. Vilsack is under pressure from the expanding organic processing industry, which was in its infancy in the 1990s when OFPA was passed, she explains. The even larger context is the cheap food policy in the U.S., which forces all industry participants to compete for small profit margins.

Ironically, since the USDA relieved the NOSB of responsibility for its own work plan, the board can now focus almost exclusively on reviewing materials up for sunset in 2017 or before, says Richardson. The NOSB's review will be "very rigorous. I can assure you, many synthetics *will* come off the list," she promises.

Ideological positions on the board vary greatly (see related story on page 6). The newly elected chair aims for inclusion: "Whether you're a huge manufacturer or a family farm with 50 cows, everyone has a voice and must be heard. I strive for common ground."

Behind the Scenes

What are the responsibilities of the 15 volunteers who make up the National Organic Standards Board? "You think you have a good idea of how much work it will be, but the reality is kind of a shock," says Richardson.

Board members typically spend 8 to 12 hours per week on NOSB business. Most members serve on three of the six subcommittees; each teleconferences every other week. The chair speaks with NOP chief Miles McEvoy and NOP staff at least once a week. The executive committee meets monthly by phone.

The subcommittees are requesting technical evaluations now for materials that will sunset in 2017 or before, with 54 listings for crops materials, 42 for livestock, and a staggering 104 for handling/processing.

Materials review is "grueling work," says Richardson. It requires reading hundreds of pages of technical documents, numerous phone calls to scientific experts, and lengthy discussion and, often, debate among board members. "We don't always agree, but we try to reach consensus," she explains, "or at least compromise."

NOSB Voting Scorecard Released

Corporate Lobbyists and Influence Peddlers Eroding Organic Standards

BY WILL FANTLE

A comprehensive voting analysis of members of the National Organic Standards Board (NOSB), the expert body formed by Congress to insulate the governance of the industry from undue corporate influence, clearly illustrates how illegal appointments to the board by current and past USDA Secretaries have subverted congressional intent.

The study reviews each individual board member's votes over the past five years, including those of corporate representatives who were placed on the NOSB in seats specifically set aside for farmers and other independent organic industry stakeholders.

"In recent years, just as with the polarized U.S. Supreme Court, many critical issues were decided by one-vote margins," said Cornucopia's Co-director and Senior Farm Policy Analyst Mark Kastel. "Almost universally, the NOSB is split along ideological lines (corporate agribusiness versus farmers and consumers) on whether to allow controversial synthetic and non-organic additives in organic food or weak animal husbandry standards utilizing the 'factory farm' production of organic meat, eggs and dairy products," Kastel added.

The study's analysis was based on Cornucopia's policy positions over the past five years, prepared by experienced organic farmers, policy experts, former certification officials, and staff scientists with doctorates in related agricultural disciplines.

"The policy positions Cornucopia has publicly taken are clearly in the mainstream of thought within the organic community and are consistent with those taken by the vast majority of other consumer, environmental and farmer-supported organizations,"



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Kastel affirmed. (See sidebar on the Policy Positions Scorecard at right.)

Cornucopia's Voting Scorecard comes two years after release of *The Organic Watergate*. That report documented how a number of risky and/or gimmicky synthetic or non-organic materials were approved for use in organics.

Of the four seats reserved for farmers on the current board, one is held by an employee of the giant California berry marketing firm, Driscoll's (which does not grow organic strawberries but rather relies on contract farmers), and one by an individual who, when appointed, worked for the country's largest organic marketing cooperative, CROPP (\$928 million in annual revenue). The voting records of these two agribusiness employees are significantly lower than those of the actual farmer members of the NOSB.

Voting records for the current 15-member NOSB board members include three independent members with a history of voting over 90% of the time to block practices eroding organic integrity. These board members are Jennifer Taylor, public interest/consumer representative and academic; Jay Feldman, environmentalist and executive director of Beyond

Many critical issues deliberated by the National Organic Standards Board have been decided by very narrow margins. Cornucopia's new scorecard outlines the voting records of current and past board members.

Pesticides; and Colehour Bondera, a certified organic farmer from Hawaii.

On the other end of the ideological spectrum, the agribusiness voting bloc all had voting records under 50%, with one member voting with mainstream positions on maintaining organic integrity only 10% of the time.

Voting scores of NOSB agribusiness representatives include those of Harold Austin (10% — handler with Zirkle Fruit), John Foster (16% — handler with WhiteWave/Earthbound Farms), Carmela Beck (17% — "farmer" with Driscoll's), and Wendy Fulwider (34% — "farmer" with Organic Valley/Whole Foods-GAP).

Dominic Marchese, a long-time certified organic beef producer from Farmdale, Ohio, observed: "If the USDA had complied with the law, and appointed somebody like myself, a working organic farmer who met the qualifications to serve on the NOSB

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The NOSB Voting Scorecard and the Policy Positions Scorecard are available under the "Projects" tab at www.cornucopia.org.



set up by Congress, instead of corporate imposters, many of the close votes over the last five years would have gone the other way.”

Marchese had applied for the NOSB three times in past years. One of those years saw USDA Secretary Vilsack choosing Driscoll’s Carmela Beck for the farmer seat.

“We also want to make sure we hold the corporations accountable that have employees on the board, corporations like Whole Foods, WhiteWave (Earthbound Farms/Horizon/Silk), General Mills (Cascadian Farms/Muir Glen), and Driscoll’s,” said Kastel. “If you want our patronage, the performance of your employees on this board has to be consistent with your marketing rhetoric in support of organics.”

Many organic farming pioneers would never have supported the USDA’s overseeing the industry they founded if Congress hadn’t agreed to create a strong NOSB as a defense against *business as usual* in Washing-

The Cornucopia Institute’s policy positions taken with the NOSB over the past two years are consistent with those of the vast majority of other consumer, environmental and farmer-supported organizations.

ton — an all-too-common cozy working relationship between agribusiness and the USDA.

Observed Barry Flamm, immediate past chair of the NOSB and now a Cornucopia board member, “I hope the Cornucopia analysis of voting records, which will continue going forward, will forewarn NOSB members that their voting behavior will be closely scrutinized and, if they are employees of corporations or certifiers with economic interests, that some of their customers will also be judging their service on the board as well.” ☺

Stakeholders’ Policy Positions Talled

A separate scorecard prepared by Cornucopia compared the industry watchdog’s official written and oral public testimony on issues before the NOSB with the official written testimony of other nonprofit public interest groups.

This analysis shows that Cornucopia’s policy positions were 100% compatible with 10 of the 12 nonprofit groups actively lobbying at NOSB meetings over the past two years, including the **Center for Food Safety, Food and Water Watch, Organic Consumers Association, Beyond Pesticides, and Consumers Union.**

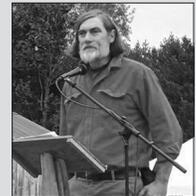
Cornucopia scored an 86% compatibility with the policy positions of the **National Organic Coalition**, an umbrella group made up of farm organizations, retailers, and organic businesses.

This scorecard also shows the policy positions of additional organic stakeholders: 1. distributors/retailers, 2. processors/handlers/manufacturers, 3. trade associations/consultants/research groups, and 4. organic certifiers.



Gerritsen Elected as Policy Advisor

The Cornucopia Institute has elected organic pioneer Jim Gerritsen to the organization’s official Policy Advisory Panel.



Jim Gerritsen

Jim, along with his wife Megan, has owned and operated Wood Prairie Farm in northern Maine for 38 years. Certified organic since 1982, the farm produces seed potatoes, vegetables and grain.

In addition to farming, Jim has been active in the organic community with nonprofit organizations for four decades. He co-founded and now serves as President of the national farmer-run membership trade organization, Organic Seed Growers and Trade Association (OSGATA). OSGATA acted as lead plaintiff in the landmark organic community Supreme Court case, *OSGATA et al v. Monsanto*.

Jim formerly served as President of the Organic Seed Alliance and also was a member for over 20 years of the Certification Committee of Maine Organic Farmers and Gardeners Association (MOFGA). In 2013, Jim helped MOFGA pass Maine’s GMO labeling law, the second such law passed in the U.S.

A frequent speaker at farmer conferences, Jim has cooperated in numerous on-farm research trials with scientists. In 2011, *Utne Reader* named Jim one of “25 Visionaries Who Are Changing the World” (a distinction shared by Cornucopia co-founder Mark Kastel).

Photo courtesy of OSGATA

Nanomaterials in Organic Food?

The USDA Is Looking the Other Way

BY PAMELA COLEMAN, PhD

At their October 2010 meeting, the National Organic Standards Board (NOSB) unanimously approved a guidance document recommending that “Engineered Nanomaterials be prohibited from certified organic products as expeditiously as possible. We respectfully request that the National Organic Program take immediate actions to implement this guidance document.”

As of today, the USDA National Organic Program (NOP) has taken no action to implement this recommendation. Engineered nanomaterials are being added to food, while consumers, who have put their trust in the safety of organic food, are being kept in the dark.

Nanomaterials are tiny particles measured in nanometers, or billionths of a meter. Nanoparticles have at least one dimension of less than 100 nanometers (nm). As a comparison, a strand of DNA is about 2 nm across; a red blood cell is 7,000 to 10,000 nm across. Due to their small size, nanoparticles ingested in food may move throughout the body in unknown ways.

There are naturally occurring nanoparticles, such as smoke from wildfires, and incidentally produced nanoparticles, such as those created in the process of flour milling. *Engineered nanomaterials (ENMs)*, in contrast, are not naturally occurring or incidental; they are intentionally manufactured.

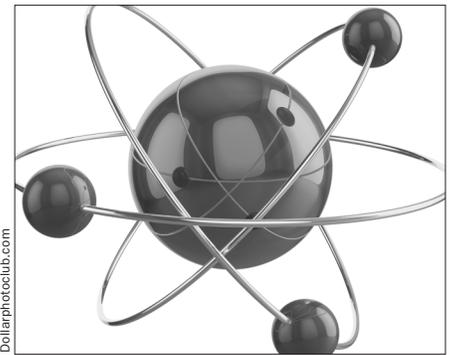
Common ENMs include titanium dioxide, nanosilver, zinc oxide, aluminum, and carbon nanotubes. The properties of ENMs differ significantly from the properties of larger particles, even those of the same chemical composition.

Nanomaterials in familiar foods

Many people are unaware that engineered nanomaterials can be added to foods, fruit and vegetable coatings, food packaging materials, supplements, and cosmetics. Titanium dioxide increases the whiteness of mints, milk, yogurt, and dairy substitutes. Nanomaterials are also used in chocolate, salad dressings, cereal, pasta, and other common foods.

Many food companies have invested heavily in *nanotechnology*, the science of creating and using nanomaterials. There are many applications for food use, but, according to a 2014 report by Friends of the Earth, “the extent to which nanomaterials are used along the food chain continues to be shrouded in mystery because of the lack of publicly accessible product registries or product labels.”

In 2005, the Project on Emerging Nanotechnologies (PEN) established an inventory of consumer products that advertise having ENM content. The inventory at one point contained more than 1,000 entries. However, funding for the inventory has run out, and PEN has not added to the database since August 2009. In fact,



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There is overwhelming agreement within the organic community to prohibit nanotechnology in organic production and processing, yet the USDA National Organic Program has taken no action.

several items have recently been removed. Foods listed in May 2014, after they were mentioned in a *Mother Jones* article, were later removed from the database. Because labeling is not required, manufacturers have removed references to nanomaterials from their product labels; as a result, it's no longer possible to verify that the products contain nanomaterials.

Use of nanomaterials in food is not regulated by any U.S. federal agency. The Food and Drug Administration

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Unique Expertise

When National Organic Standards Board (NOSB) members invest a significant amount of time investigating an issue and collaborating with organic stakeholders, the USDA National Organic Program has a responsibility to act in a timely manner. Since every board member serves for only five years, expertise on any unique issue is quickly lost.

Cornucopia is fortunate to have on its board of directors three former members of the NOSB: Goldie Caughlan (2001–2005), Kevin Engelbert (2006–2010), and Barry Flamm, PhD (2008–2012). Current NOSB member Francis Thicke, PhD (appointed in 2013) serves on Cornucopia's Policy Advisory Panel. Both Barry Flamm and Kevin Engelbert, NOSB members during the nanotechnology debate, have expressed concerns that engineered nanomaterials may currently be added to organic foods.

(FDA) does not require nanomaterials to be listed on the product label. Consumers may assume that the lack of federal oversight means that nanotechnology has been well studied and proven safe, but such is not the case.

The Friends of the Earth report concludes that nanoparticles in food can harm human health, although the specific effects are not well understood. The report explains that ENMs are more chemically reactive and more bioactive than larger particles of the same chemicals. Several other organizations have written reports urging caution regarding the many uses of nanotechnology in food, and requesting oversight from federal regulatory agencies.

Due to their very small size, nanoparticles are more likely than larger particles to enter human cells, cross the blood brain barrier, or move across the placenta from mother to fetus. They've been shown to damage DNA, cause lesions on the liver and kidneys, and disrupt cellular functions.

NOSB's proactive deliberations

The NOSB was concerned about this new technology being used in organic food. In four consecutive meetings, nanotechnology was on the NOSB agenda (spring and fall, 2009 and 2010). The NOSB commissioned a technical evaluation, listened to public comments, and wrote a guidance

document that concluded, "There is overwhelming agreement within the organic industry to prohibit nanotechnology in organic production and processing at this time."

Several public interest groups urged an immediate prohibition on nanotechnology: the Center for Food Safety, Consumers Union, Food and Water Watch, Institute for Agriculture and Trade Policy, International Center for Technology Assessment, National Organic Coalition, Organic Consumers Association, and True Food Network. Consumers Union elaborated that the USDA National Organic Program should consider nanotechnology to be an excluded method, rather than debate whether each unique chemical is a prohibited material.

Trade organizations and industry groups, on the other hand, oppose any prohibition on engineered nanomaterials in organic food. As a compromise, the NOSB suggested a symposium to aid in evaluating the uses and regulation of nanotechnology, rather than an immediate prohibition of nanomaterials.

Consumer groups recommended a firm stance to prohibit nanomaterials in organic food, rather than waiting for a symposium. The Institute for Agriculture and Trade Policy (IATP) noted that a symposium would not yield any new information on the

hazards of nanotechnology "[g]iven the refusal of industry to submit food and agri-nanotechnology product data for risk assessment and regulatory review."

NOP's (non)response

The USDA National Organic Program's only response to the NOSB recommendation came in a December 2010 memo stating the NOP "intends to gather additional information about how nanomaterials are regulated and used in agricultural production and handling. ...[T]he NOP will gather information from other agencies...and report back to the NOSB." *Four years later, it has yet to do so.* After two years of volunteer effort by board members, and overwhelming agreement from the organic community, why would the NOP fail to act?

Engineered nanoparticles are clearly synthetic, and the organic community clearly wants to prohibit them from organic food and packaging materials. Congress gave the NOSB specific power to regulate synthetics used in organic food production. It's time for the USDA to take action on this NOSB guidance document—prohibit ENMs, and ensure that certifiers prevent this threat to organic food.

A version of this article with references is available at www.cornucopia.org.

The Cornucopia Institute Is Hiring!

Cornucopia is seeking individuals with a *true passion and enthusiasm* for protecting the integrity of organic food and agriculture, and the family farmers who produce it. If you possess an impressive track record, along with relevant academic degrees, in the areas of livestock policy, agronomic practices and inputs, food ingredients and nutrition, or organic certification and regulation, please contact us. Although we seek seasoned professionals, with a high degree of technical experience, we would entertain applications from recent graduates with master's and/or doctoral degrees in programs that directly relate to Cornucopia's scope of work. Duties include research, writing, and conducting investigations into organic and sustainable food and farming production practices as well as networking and communicating with farmers, consumers, other organizations, and the media. We seek individuals who will strengthen our knowledge base.

The Cornucopia Institute is formally based in Cornucopia, Wisconsin, but is "virtually officed"—staff members telecommute from home offices around the country. Because of this, applicants must be highly motivated and able to work independently. Please visit www.cornucopia.org for a full job description.

FACTORY FARMS

Continued from page 1

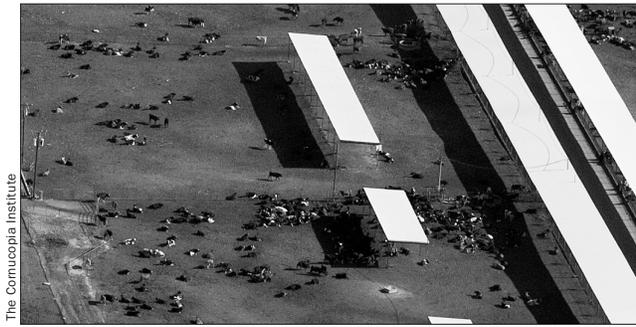
Reports and evidence gathered by Cornucopia continue to contradict the USDA's assessment. To further buttress this case, Cornucopia this summer began using aerial photography across the United States to gather direct and dramatic graphic evidence that animals on these factory farms are not being managed in accordance with organic law.

Federal regulations explicitly state that living conditions for organic livestock must "accommodate the health and natural behavior of animals." For chickens, that means the birds are outdoors, foraging and feeding, dust bathing, and scratching about. Cows should be out grazing on pastures.

All species, according to organic regulations, are to have year-round access to the outdoors, shade, shelter, exercise areas, fresh air, clean water for drinking, and direct sunlight. While temporary confinement is allowed, it is only intended for circumstances such as inclement weather, safety, care for illness or injury, and risks to soil or water quality.

Cornucopia's eye in the sky is revealing that violations to the spirit and the letter of federal organic law appear to be occurring. At one factory dairy in Texas, all of the cows are confined in a feedlot; none are out grazing and moving about on the surrounding fields. In fact, these nearby fields have been freshly mowed with the feed already baled for future use. "We see thousands of cows at this operation without any pasture as organic law requires," Kastel observes.

Overhead of a massive egg laying facility in Texas, Cornucopia's aerial images capture an absence of chickens outside the rows of barns in which they are confined by the tens of thousands. The plane's camera also records a grossly inadequate amount of land allocated for the hens and



totally inappropriate for their density even if they had actually been outside.

Hundreds of images from Texas to Massachusetts have been catalogued by Cornucopia and are being evaluated and assessed. The operations under aerial examination were identified from farm visits, industry sources, satellite imagery, and tips from Cornucopia "intelligence agents" (members) across the country.

"We intend to use these photos to demonstrate, where applicable, how and why organic regulations are being broken," says Kastel. "If the USDA fails its congressionally mandated enforcement responsibilities, we will likely ask for congressional hearings and/or end up in court. We will continue to protect the interests of ethical organic farmers and their dedicated customers who choose food from animals that are cared for in a humane manner resulting in nutritionally superior products."

Ten years ago, when Cornucopia first began raising awareness about the creep of factory farm, confinement-style livestock operations into organics, the organic industry pulled in \$12 billion a year. Today it has tripled in size.

But that explosive growth in the size of the organic market has not fostered a similar increase in the number of farmers involved with organics. One big reason that a corresponding growth in organic farms in the U.S. hasn't materialized is the lack of a level playing field. The cheaper confinement-style management model, employed by industrial-

At left: Some of the thousands of cows in the feedlot at one of Aurora Dairy's "organic" farms in Texas

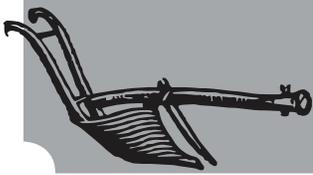
scale operators, allows them to squeeze out competitors who follow the letter of the

law. Sadly, some family farmers are even exiting organics due to the low farm gate prices they receive for their commodities and foodstuffs.

So how can real food advocates and conscious consumers know that the organic food they are purchasing is coming from farmers faithfully following the best organic practices? This question is especially poignant given that legal actions filed by Cornucopia against suspected organic scofflaws can drag on for years before final resolution. In one case, Shamrock Dairy in Arizona, USDA investigators confirmed Cornucopia's initial allegations that Shamrock was operating illegally, yet nearly six years since the initial filing, due to appeals the scofflaw operation is still selling "organic" milk.

To help the public make wise marketplace decisions, Cornucopia's researchers have created commodity scorecards grading brands of organic egg, dairy, soy foods and other products found in grocery aisles. By consulting these scorecards (www.cornucopia.org), consumers and wholesale buyers can identify foods available in their region that they can purchase with confidence.

According to Jason Cole, Cornucopia Research Associate, the scorecards are updated in real-time. "It's an ongoing project," he says. "We are making several updates on a monthly basis. We want consumers to have the most current information so they can support the true farmer heroes engaged in sustainable, ecologically sound and humane agriculture." ©



The Sizzle of Fizzle Flat Farm

BY MELODY MORRELL

Fizzle Flat Farm, LLC is a 1,000-acre organic farm that has been in the family for four generations. It was given this quirky name over 100 years ago for the effect of heavy spring rains on its absolutely flat fields of newly planted crops. Marvin and Carol Manges took the farm over from Carol's parents in 1977, adding acreage.

Marvin quickly realized that conventional farming was going to be expensive: the cost of fertilizer for a single year was equivalent to the price of the land itself at that time. When the universities couldn't answer his questions,

Concerned about the dangers of agrichemicals and topsoil loss from runoff, Marvin Manges began to realize he was "looking for something more sustainable than 'sustainable agriculture'."

he helped start the Illinois Sustainable Agriculture Society and the Southeastern Illinois Sustainable Agriculture Association (SISAA). Three operators in each of 14 counties conducted their own research, from water research to field days on their farms. Marvin says he began to realize he was "looking for something more sustainable than 'sustainable agriculture'."

It was a string of personal experiences that led the Manges family to organics. On a visit to New Orleans, Marvin and Carol saw a plaque on the Mississippi noting how many gallons of water passed by every second. At the same time, a U.S. Army Corps of Engineers barge was dredging organic matter out of the river to facilitate the navigation of the *Queen Mary*. Marvin thought about what experts call "tolerable loss of soil," and wondered if some of what was being dredged up had come from *his* farm. He went home determined to conserve and build soil.

When the next spring rains hit his first hairy vetch crop, the runoff ran clear. The runoff from the neighbor's farm that flowed through a ditch near his farm was muddy. Marvin still shows those water samples to visitors today.

The Mangeses were also aware of the dangers of agri-



Organic farmer Marvin Manges

cultural chemicals. Young Illinois farmers were dying of cancer. Carol's mother got colon cancer, likely from her contaminated well; the chemical tanks had been filled there for years. At the time, Marvin was reading studies on water quality suggesting that 80% of

wells in Iowa were contaminated with agricultural chemicals. After years of spraying 2,4-D from a barrel behind his tractor, Marvin's father contracted Parkinson's. His doctor told Marvin that welders and farmers were most commonly afflicted, likely due to contact with industry chemicals.

One of the SISAA farmers suggested organic certification, and by 1990 all of the farmed acres the Manges family owned at that time were certified.

A few years ago, Fizzle Flat Farm's grass-fed beef was discovered by a Chicago-area oncologist who began recommending it to his patients. The cattle are not certified but the land is, and Fizzle Flat Farm was one of the few grass-fed beef operations of its kind in Illinois at the time. Word got around. Marvin now has a cow-calf operation of almost 300 head, many of which are raised to maturity and sold directly to consumers.

Marvin also grows food-grade grains and soybeans for individuals, grist millers and other processors, and the farm has a certified grain cleaning facility for custom cleaning for other organic farmers and end-users. His white, yellow and blue corn are ground for grits and distributed across the United States and Europe, and have even made it to the White House table. Leftover cleanings are sold for feed ingredients.

As an organic farmer, Marvin's concerns include overspray from cropdusters taking off from the nearby airport and cross-pollination from neighboring GMO crops. When he hears Monsanto's commercials on the radio, he shakes his head and muses, "If the consumer only knew...". Because liability for GMO contamination rests with the organic farmer, Marvin grows popcorn which cannot cross-pollinate with the GMO corn his land is surrounded by, and he plants his other corn late enough to avoid simultaneous pollination. A good deal of consideration and preparation go into organic farming.

Marvin has spent his life observing the land and its health, and he gladly shares his bountiful knowledge with anyone who is interested. ☺



FIZZLE FLAT FARM
Yale, Illinois
www.fizzleflatfarm.com
(618) 793-2060



CORNUCOPIA
INSTITUTE

WhiteWave to Dump Food Additive



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Bowing to consumer pressure largely driven by social media, WhiteWave Foods has announced it will remove the controversial food additive carrageenan from its Silk and Horizon products in 2015 and 2016. Animal studies have linked the ingredient to serious gastrointestinal illness and even cancer.

The Cornucopia Institute's popular report, *Carrageenan: The "Natural" Food Additive That Is Making Us Sick*, and activist-bloggers such as "Food Babe" Vani Hari helped drive the people power to score this important win for the good food movement. (See related story on page 3.)

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Choices for Charitable Giving



With giving season just around the corner, it's a good time to consider the many alternatives you have for supporting your favorite charities and causes.

Your employer is a good place to start. "Certainly investigate if your firm has a charitable donation program, and certainly take advantage of it," urges Cornucopia member Inoki Suarez, a former VP with General Electric who made the most of his company's generous match. "Even if you only donate \$100, you can double your impact." Every dollar matters, especially to smaller nonprofits such as Cornucopia, "because they find a way to stretch every cent," Suarez notes.

If you realize a gain on appreciated assets, consider contributing the stock or other asset directly to a tax-exempt charity. You'll save on taxes *and* make a difference to a cause important to you.

A third option is to set up a donor-advised fund. One of the fastest growing charitable giving vehicles in the U.S., a donor-advised fund offers many benefits, says Jennifer Southard, VP with the Maine Community Foundation. "It's very easy to set up, low cost to maintain, and requires much less paperwork than a private family foundation," explains Southard, who works with over 50 donor advisors. This vehicle allows you to direct grant dollars to the charities of your choice, ensures anonymity, if desired, and offers certain tax advantages.

For more information about these and other ways to give, please visit the "About" page at www.cornucopia.org or send us an email to cultivate@cornucopia.org. We sincerely hope you will include your trusty organic watchdog in your giving plans this year.

—ELIZABETH WOLF