

THE CULTIVATOR

NEWS FROM THE CORNUCOPIA INSTITUTE

SPRING 2015

Is Hydroponics Organic?

USDA's Organic Program Allows Soil-less Practice Over NOSB's Objections

BY LINLEY DIXON, PhD

Hydroponics is a technology for growing terrestrial plants with their roots in nutrient solutions (water with dissolved fertilizers) rather than soil. Hydroponic production is not mentioned in the Organic Foods Production Act (OFPA) of 1990; however, in 2010 the National Organic Standards Board formally recommended that hydroponic systems be prohibited from obtaining organic certification.

In direct contradiction to the Board's recommendations, the USDA's National Organic Program has sided with industry lobbyists pronouncing that hydroponics *is* allowed. And, despite the objections of many organic stakeholders, some accredited certifying agents are certifying hydroponic operations.

When the National Organic Standards Board (NOSB) first sought to define the term *organic*, in 1995, they did not consider the concept of growing organic crops without soil. The NOSB originally defined organic agriculture as “an ecological production management system that promotes and enhances biodiversity, biological cycles, and **soil biological activity**. It is based on **minimal use of off-farm inputs** and on management practices that restore, maintain, and enhance ecological harmony” [emphases added].



The National Organic Standards Board formally recommended that hydroponic systems, such as the lettuce farm above, be prohibited from organic certification.

Given this definition, can the term *organic* be applied to soil-less systems, such as hydroponic crop production? Strictly speaking, the 1995 definition of organic would not only prohibit hydroponics, it would prohibit organic aquaculture as well. However, the NOSB has developed recommendations for organic aquaculture for aquatic animals (fish and shellfish) and plants. In fact, later definitions of organic removed the reference to soil.

In 2002, the National Organic Program (NOP) redefined organic production in the Code of Federal

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Democracy in the Grocery Aisle?

COMMENTARY BY WILL FANTLE

One of the more interesting takeaways from the state-based battle to enact GMO food ingredient labeling has been the deluge of money that Monsanto, their biotech allies, and Big Food corporate interests have been willing to spend to drown out your right-to-know about what you are putting in your mouth. Cornucopia's research reveals that these supporters of ignorance have collectively showered more than \$100 million on the four state referendums to date, in California, Washington, Colorado and Oregon.

Ever since the U.S. Supreme Court ruled on *Citizens United*, whatever constraints existed on corporate spending in elections have evaporated. Although state referendums are a different electoral animal, the willingness of corporate power to spend all that they need to prevail has been fully demonstrated. They have juiced the system and tilted electoral power in their direction.



While Monsanto and their allies have thus far proven successful—albeit narrowly in three of the four states—the handwriting may be on the wall. Good food activists are growing increasingly aware that they hold power in the marketplace that even the corporate behemoths must respect.

It is somewhat ironic that democracy may break out in the marketplace while it is being squelched at the ballot box. Clearly, the biotech forces and Big Food need us to buy their products in our consumer society. Yet in spite of their sophisticated, expensive advertising and packaging, increas-

ing numbers of conscious consumers are doing their own food and product research (fueled by help from organizations like Cornucopia).

Using their heightened awareness and their focused purchasing power, these savvy eaters are forcing companies like Kashi (owned by Kellogg), WhiteWave, Organic Valley, Kraft, and Stonyfield to make healthier changes to products. Why? For the most part, these companies are terrified of how their investors and/or Wall Street will react and punish them for unresponsive arrogance and diminished sales.

Amplify your power as a conscious eater. Investigate our various food and commodity product scorecards (visit www.cornucopia.org), and then share this information and the related web links with your social network. This research is regularly updated so that you and your friends can make the best “vote” in the marketplace.

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See No Evil

Organic Industry Bigwigs Dispute What Cornucopia's Aerial Photos Reveal

BY MARK A. KASTEL

Organics was founded on a loving collaboration between family farmers and eaters who established an alternative to the industrial paradigm of how our food, including livestock, is produced.

When we founded The Cornucopia Institute, nearly 11 years ago, there were two CAFOs (concentrated animal feeding operations or “factory farms”), each producing “organic” milk from thousands of cows. Today, there are over 20.

The Organic Foods Production Act, passed by Congress, is a good law but both the Bush and Obama administrations have rolled out the red carpet for corporate agribusiness lobbyists to shape organic regulations and enforcement with an emphasis on profit rather than organic integrity.

Over the past decade, Cornucopia has hammered the USDA and the White House on grossly incompetent, or intentionally harmful, management of the organic program. We have filed numerous legal complaints, some of which have shut down factory farms or constrained their production, while others have been ignored or dismissed.

So, throughout most of 2014, Cornucopia contracted with a professional aerial photography service to photograph 15 “certified organic” factory farms from West Texas to the eastern seaboard.

To view a gallery of over 80 aerial photos of these giant “organic” livestock operations, visit www.cornucopia.org/flyovers



Aerial photos by The Cornucopia Institute

MBA Poultry, marketing under the trade name Smart Chicken, maintains 40 barns near Tecumseh, Nebraska. On the day this photograph was taken, all had fencing but with gates open, freshly mowed grass, doors closed, and no sign of birds ever being outside. This was true of all 40 barns.

We forwarded over 250 highly detailed 50-60 MB images to the USDA. We additionally provided scores of other satellite photos and supporting documentary material.

Our flyover campaign was the subject of an investigative report on December 11 in the *Washington Post* (so we know this landed on the USDA Secretary's desk). And what have been the results?

The U.S. Department of Agriculture Nothing. Congress charged the USDA with protecting the interests of ethical organic stakeholders and the authenticity of organic food. You'd think that the magnitude of the alleged violations would prompt some kind of response. We're talking about dairies managing 18,000 cows and poultry “farms” licensed to raise over 1 million hens.

Weeks after we transferred this

When The Cornucopia Institute was founded, nearly 11 years ago, there were 2 organic CAFOs. Today, there are over 20. When the reputation of organics is tarnished, everyone loses – large and small industry participants alike.

information to the USDA, they have said nothing publicly. They didn't even acknowledge receipt of the voluminous materials we supplied, via Federal Express and email, until we contacted the National Organic Program Staff Director, Miles McEvoy. He subsequently had their enforcement staff confirm that they had, indeed, received the evidence.

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SEE NO EVIL

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Organic Trade Association

It's a shame that the OTA, the powerful industry lobby group, would express no concern over the threat to organic integrity represented by the widespread pattern of giant industrial-scale livestock producers "gaming the system" and the USDA going along for the ride.

When the reputation of organics is tarnished, everyone loses, large and small industry participants alike, as well as organic eaters.

Instead, the OTA issued an industry damage-control release stating:

"We continue to have confidence in the oversight of organic operations and in the checks and balances built into the organic certification system which includes regular inspections of operations, regular accreditation audits of certifiers, and complaint investigation procedures."

Nate Lewis, a specialist on organic certification of livestock operations for the OTA, was unimpressed by the photos. "For any of these photos, I could come up with a completely valid reason for what you're seeing," he told an NPR reporter. In the case of egg-laying chickens, for instance, the rules allow animals to be enclosed for several different reasons, such as when temperatures outside are too hot or cold, for reasons of preventive health care, or when the chickens are very young.

Maybe Mr. Lewis' title should be changed to "Corporate Apologist." He certainly is doing his job defending OTA members.

But isn't it a coincidence that all 14, randomly selected factory farms, producing "organic" eggs, milk and chicken, were confining their animals on a wholesale basis the day an airplane happened to fly overhead? Does this instill confidence, as the OTA has, in organic oversight of cer-



Photo courtesy of RedHill Farms

In stark contrast to MBA/Smart Chicken's industrial-scale operation, RedHill Farms, multiple coops on multiple farms in Marin County, California, gives laying hens access to pasture all day long, as well as enrichment such as this handmade perch.

Petaluma Farms is currently under investigation for organic violations and animal abuse, but you won't find the name on Organic Valley's website. They refer to their new "family farm" member in California as "Judy and Steve's Egg Farm," delineating the first names of the agribusiness' owners.

tification by the USDA? I will remind readers that, until recently, 100% of the inspections that took place, annually, were made by appointment. And now the certifiers, being paid by their clients, are choosing which outfits get unannounced visits.

Upton Sinclair once said, "It is difficult to get a man to understand something, when his salary depends on his not understanding it."

Chino Valley (Idalou, Texas)

"Based on what I see in the picture, it's high noon," said David Will, general

manager of an associated company, Chino Valley Ranchers. "You will find that birds avoid being outside on bright sunny days. They are a prey creature. They are not predators." The day after the article appeared in the *Washington Post*, Chino sent the newspaper a photo of a small percentage of their birds outdoors.

The 15 high-resolution photographs Cornucopia shared with the USDA, shot from every angle, show no birds out (either in direct sunshine or in the shade). Four additional satellite images, from two other days, show no birds out as well.

What should the public and the USDA believe? Unannounced, independently procured photos or a possibly "staged" photo submitted by the factory farm operator under scrutiny?

Aurora Dairy (Clearwater, Texas)

"A single photo doesn't really tell us anything about a farm and its practices," an Aurora spokesperson, Sonja Tuitele, told the *Washington Post*.

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“It is difficult to get a man to understand something, when his salary depends on his not understanding it.”

—Upton Sinclair

“Our records do indicate that all of our lactating cows at the Coldwater facility were grazing on pastures on May 17. Since we don’t know what time of day this photo was taken, we can only assume this photo was taken outside of their daily grazing hours.”

The shadows in the photo suggest it is about mid-day. Maybe if you are a highly paid executive at an industrial dairy concern, you might think of “grazing hours” the same way some country club members think about “banker’s hours.” Most *real* organic farmers don’t limit their cows’ access to pasture—and the law doesn’t allow for that (unless there are weather concerns). The photos were taken on a sunny 78-degree day, perfect grazing conditions for the 18,000 cows at Aurora’s Coldwater, Texas feedlot.

Organic Valley

Maybe the most disappointing response has come from George Siemon, CEO of Organic Valley, a farmer-owned cooperative that has grown to an almost \$1 billion a year enterprise. In an interview on NPR, Siemon said that he does not believe that “the organic producers targeted by Cornucopia are flouting the rules.”

This might seem like a strange disconnect coming from the leader of a co-op that gets almost all of its milk and eggs from family-scale farmers. That is, until you dig a little deeper and find that, when it ran short of milk a few years ago, the management of the co-op (without the knowledge of its farmer-owners) decided to purchase milk from one of the targeted factory farm dairies: Natural



Milking 8,500 cows in the desert-like Texas Panhandle, Natural Prairie supplied milk to Organic Valley until the farmer-members of that cooperative demanded they stop. On the day this photo was taken, almost all the cows were in the dry lot rather than on the surrounding irrigated fields.

Prairie in Texas, milking 8,500 cows. This continued until OV farmers demanded it stop.

Evidently management didn’t learn much from the experience because when they wanted “local” California eggs, they chose an industrial/confinement operation, Petaluma Farms, currently under investigation for organic violations and animal abuse, after settling a lawsuit for consumer fraud. You won’t find the name “Petaluma Farms” on the OV website. They refer to their new “family farm” member in California as “Judy and Steve’s Egg Farm,” delineating the first names of the agribusiness’ owners.

Closing Thoughts

In the pages of his best-selling *The Omnivore’s Dilemma*, Michael Pollan describes Petaluma Farms as a good representation of his definition of “supermarket pastoral.” I call this type of subterfuge “farming by press release.”

As they say, a picture is worth a thousand words. Either these corporate executives and lobbyists are in need of a good ophthalmologist or their definition of organics differs from the farmer-members at The Cornucopia Institute and our urban-allies, who believe in the environmental stewardship, humane animal husbandry, and positive health and social impacts that true organics represents.

Cornucopia’s scorecards rating hundreds of brands of organic dairy, eggs, soy foods, breakfast cereal and yogurt help you choose the best foods while rewarding the true organic heroes. Click the Scorecards tab at www.cornucopia.org.



Carrageenan Update

What Cornucopia Is Doing to Remove this Inflammatory Ingredient from Organics

BY WILL FANTLE

Part of The Cornucopia Institute's commitment to protecting the integrity of organics has been increased scrutiny given to non-organic and synthetic materials proposed for use in organic agriculture or in the processing of organic food products. Federal regulations ban the use of these materials unless specifically reviewed and approved. The substance must be deemed essential (without natural or organic alternatives), and its manufacture, use and disposal must not harm the environment. Most importantly, it must not harm human health.

Should a material pass these thresholds, it is placed on the USDA's *National List* of allowed and prohibited substances. These permitted materials require after five years another similar review by the National Organic Standards Board (NOSB) to determine whether or not they should remain on the National List.

One of Cornucopia's wake-up calls regarding National List materials came with the controversial approval and listing of a synthetic, algae-based DHA oil for use in organic foods in 2011 (see our report *Replacing Mother: Infant Formula Report*). The questionable approval of DHA, pushed through by raw corporate power, led Cornucopia to take a much closer look at all non-organic and synthetic substances proposed for use in organics (or up for sunset renewal).

Now operating under this broadened mandate, Cornucopia staff looked carefully at additives such as carrageenan. Used for decades in conventional and "natural" foods, carrageenan was first approved for use in organics in the 1990s. Carrageenan provides no nutritional value to pro-

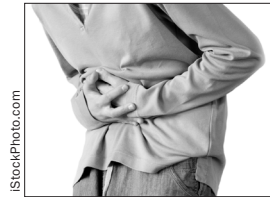
cessed foods; it is added as a stabilizer, thickening agent or emulsifier to make a finished product that improves what food technologists call "mouth feel."

Cornucopia staff found, under closer scrutiny, that carrageenan presents a host of problems. Particularly concerning are its known gastrointestinal inflammatory properties, including higher rates of colon cancer, in laboratory animals. Much more information on this can be found on Cornucopia's website.

Cornucopia staff and supporters pushed hard for the removal of carrageenan as an approved organic additive when it came up for its five-year review in 2012. But the carrageenan trade lobby group fought back hard and found allies, at the time, in companies like Group Danone (Stonyfield), CROPP (Organic Valley), WhiteWave (Horizon and Silk), Hain Celestial (Earth's Best, Rice Dream and WestSoy), and Smucker's (Santa Cruz Organic and R.W. Knudsen).

Their lobbyists convinced enough corporate-friendly NOSB members, including employees of Whole Foods, Organic Valley and Driscoll's sitting on the Board, to ignore the disturbing findings of dozens of publicly funded and peer-reviewed studies and to renew its usage.

Since then, Cornucopia has asked the FDA Commissioner to remove carrageenan's GRAS (Generally Regarded as Safe) status. A petition on Cornucopia's website has gathered more than 35,000 signatures (please read and sign it if you haven't). GRAS status involves no independent health and safety review by the FDA; it depends entirely on industry-submitted information attesting to the safety of a product. The numerous peer-reviewed studies detailing carrageenan's potential health impacts are not



necessarily reviewed by the FDA in their determination.

We have also solic-

ited personal accounts from individuals detailing what happened to their health when they removed products containing carrageenan from their diet. Thus far we have received more than 1,200 testimonials and are sharing them with researchers.

Many of these individuals related symptoms of inflammatory/irritable bowel disease and other gastric maladies. And many had invested considerable time and money with doctors and clinical specialists seeking relief from their trauma—to no avail. However, when learning of the potential impact of carrageenan and choosing to more closely review ingredient labels and then reject products containing the additive, many of these individuals reported almost immediate relief (within 24 to 72 hours) and disappearance of their problems.

Cornucopia will ramp up our public education and regulatory efforts on carrageenan in the near future. We will again seek to remove it from organic products before the NOSB and will shortly be presenting our petition calling for removal of its GRAS status to the FDA. Look for alerts from us on how you can help. And if you know someone who has inexplicable gastric problems, please share the materials on our website with them and perhaps they will find relief.

Find the report, shopper's guide, health questionnaire and FDA petition at www.cornucopia.org



Yogurt Scorecard FAQ

Just Released: New Infographic on Ingredients to Avoid

BY JASON COLE

In December of 2014, Cornucopia released its latest report, ***Culture Wars: How the Food Giants Turned Yogurt, a Health Food, into Junk Food.*** The report accuses marketers such as Dannon, Yoplait, and Chobani of misleading consumers into purchasing yogurts with very high levels of sugar and a wide variety of potentially unsafe additives.

Cornucopia also published an accompanying scorecard that rates yogurt brands on their usage of these additives and on other factors such as the amount of added sugar and whether the brands are certified organic. Due to the enormous size of the yogurt market, the scorecard rates *brands* of yogurt, rather than individual products.

Since the publication of *Culture Wars*, Cornucopia has received a number of questions from the public. Listed below are some of the most common ones, along with answers that will make the scorecard more useful.

What elements are used in determining a brand's score, and what do the numbers mean?

We graded brands based on the following on the ingredient labels: thickeners, carrageenan (a potential inflammatory agent), artificial sweeteners, type of added sugar, total sugar, coloring, artificial coloring, natural/artificial flavoring, synthetic nutrients, milk protein concentrate, and preservatives. For each question, brands received 0 points if a given additive was present anywhere in their product line and 100 if it was absent. Brands also received points for being certified organic. A thorough explanation of the scoring criteria is linked on the scorecard.

Why do organic brands receive a higher rating?

Organic brands receive a higher rating because there are scientifically proven nutritional benefits to consuming organic milk over conventional. Organic milk has been found to have higher levels of beneficial fats, including conjugated linoleic acid (CLA), omega-3s, and higher levels of naturally occurring beta carotene (vitamin A), tocopherols (vitamin E), and the antioxidants lutein and zeaxanthin. In addition, organic cattle are not given growth hormones or fed GMO grain that has higher glyphosate residues from the use of Monsanto's Roundup Ready seed technology.

My favorite brand gets a very low rating, but it offers a plain variety with no bad ingredients or added sugar.

The ratings are intended to shine a spotlight on those corporations primarily responsible for turning yogurt into

junk food, and to assist consumers as they navigate the wide array of yogurt choices at the supermarket. Brands are graded on whether each element we looked for is present in *any* yogurt item they produce. Some brands with very low scores do offer plain varieties that are reasonably healthy choices. We urge consumers to read ingredient labels closely and look over a new infographic we have created that shows which ingredients to avoid. Our goal is to showcase the most trustworthy manufacturers.

You deducted points if the amount of sugar was deemed high. Doesn't yogurt naturally contain sugar?

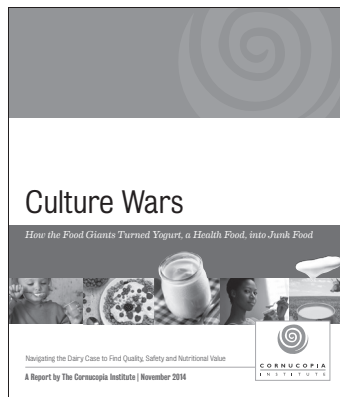
Yes, there is sugar (lactose) in yogurt that comes from the milk that is cultured to make it, and nutrition labels do not list added sugar, only total sugar present. To allow for the sugar that is naturally occurring in yogurt, we gave full points to brands that had 12 grams of sugar or less per six ounces. Beyond 12 grams, we deducted 10 points for each gram. Cornucopia's research indicates that all plain (unsweetened) varieties available in the marketplace had less than 12 grams of sugar per six ounces.

Why can't I print the scorecard?

Due to the amount of information within the online scorecard, it cannot be viewed well in a printable format. We have created a printable version of the chart, available by request by emailing cultivate@cornucopia.org. Please be aware that the data online is regularly updated.

Why isn't my favorite brand included in the scorecard?

We endeavored to include all brands that meet the FDA's standard of yogurt (milk base with live and active cultures) available in the United States. By definition, this does not include plant-based yogurts. If you know of a brand we missed, please let us know and we will add it.



Visit cornucopia.org for the yogurt report, scorecard and new infographic. Email cultivate@cornucopia.org for a printable copy of the scorecard.



HYDROPONICS

Continued from page 1

Regulations as “a production system that...respond[s] to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biological diversity.”

The later definition does not require that organic systems be soil-based, but it does require that organic methods include the use of biological practices that foster the cycling of resources.

In a hydroponic system, terrestrial plants have their roots not in soil but rather in air, water, or an inert medium, such as peat, vermiculite, or coconut coir to which polystyrene beads or perlite may be added. The roots are immersed in water or periodically bathed with a nutrient solution (often containing synthetics).

In contrast, the production of aquatic plants, such as the freshwater alga *Spirulina*, is not considered hydroponic production. It is aquaculture.

When fish are added to the hydroponic system, it is called **aquaponics**—the integration of aquaculture with hydroponics. An aquaponic system fosters the cycling of nutrients because the nutrient-rich water from fish tanks is used to fertilize (or “ferti-gate”) the plants. Fertility is generated from biological cycles, rather than off-farm inputs. Plants act as biological filters, so that the water can be recirculated, and reused. It is considered a highly sustainable system. In hydroponics, fertility is usually generated from off-farm inputs.

History of NOSB Deliberation

In 2003, the NOSB prepared a guid-

ance document for hydroponics and other soil-less growing systems, but did not present any firm recommendations. At the Spring 2008 meeting, the Crops Subcommittee of the NOSB again led a discussion on guidance statements relative to limiting hydroponic systems to naturally aquatic



“Organic farmers are not just tillers of the soil, but also stewards of soil ecology on the farm.” —National Organic Standards Board

plant species, but it was never voted on by the full NOSB.

In 2009, the NOSB’s Crops Subcommittee presented a discussion item at the spring meeting which noted: “Hydroponics ...certainly cannot be classified as certified organic growing methods due to their exclusion of **the soil-plant ecology** intrinsic to organic farming systems ...” [emphasis added].

At the September 2009 meeting, the NOSB presented a recommendation for federal rulemaking, the addition of §205.209 Greenhouse Production Systems. **The recommendation again stated a prohibition of hydroponic systems.**

After public comment was received, the Crops Subcommittee wrote a recommendation, *Production Standards for Terrestrial Plants in Containers and*

Enclosures. The full NOSB approved the document, and made a formal recommendation, which was submitted to the NOP on April 29, 2010. This document is a result of years of work by the volunteers on the NOSB and public comment from organic stakeholders. The document recommended rulemaking action by the NOP.

The recommended regulations state, in part: “Growing media shall contain sufficient organic matter capable of supporting natural and diverse soil ecology. **For this reason, hydroponic and aeroponic systems are prohibited**” [emphasis added].

Public Comments to the NOSB

Pennsylvania Certified Organic (PCA) and Oregon Tilth Certified Organic (OTCO) both supported the recommendation to prohibit hydroponics, citing the organic foundation of soil in organic agriculture. The Organic Trade Association (OTA) also supported the prohibition, citing that Canada prohibits hydroponic production from being certified organic.

California Certified Organic Farmers (CCOF) strongly disagreed with the NOSB’s recommendation, mentioning that they had, at the time, certified organic hydroponic operations. CCOF supports both hydroponic and aeroponic systems as eligible for organic certification. (Aeroponics, another soil-less practice, grows plants in an air or mist environment.)

Current NOP Status of Hydroponics

Although the full NOSB developed a recommendation to prohibit organic hydroponics in 2010, the NOP still has not adopted this formal recommendation. Because the NOP has not issued guidance or regulations, some accredited certifying agents (ACAs) have augmented their revenue stream by going ahead and certifying hydroponic systems in the meantime.

The ACAs that certify hydroponic/aquaponic systems, or have done so in the past, include CCOF, OTCO, Quality Assurance International (QAI), Indiana Certified Organic, Midwest Organic Services Association (MOSA), and Organic Certifiers, Inc. There may be others, but it's impossible to fully determine if an ACA certifies hydroponic farms because they are not required to state whether an organic farm is producing crops hydroponically.

In response to this confusing state of affairs, Dave Chapman, an organic farmer in Vermont, drafted a petition to the NOP asking them to formally accept the NOSB recommendation (see sidebar). On February 7, 2014, the National Organic Coalition (NOC) released their Position on Hydroponic Production in support of the NOSB recommendation from 2010 that stressed *“organic farmers are not just tillers of the soil, but also stewards of soil ecology on the farm.”* NOC's position paper states, *“Until a clear definition has been provided by the NOP, certifiers*

should not be allowed to certify hydroponic systems.”

After the petition from David Chapman and the comments from the National Organic Coalition, the NOP clarified its stance. On February 21, 2014, the NOP posted information on their webpage (under “Organic Topics of Interest”) and, in May of 2014, also in their Organic Integrity Quarterly (the full text is in appendix 2). In both, the NOP stated unequivocally, *“Organic hydroponic production is allowed.”*

This statement on the NOP website does not constitute a regulation or even guidance, but it does provide support for certifiers who wish to certify hydroponic production systems. It indicates that crop production can be considered organic even when terrestrial plants are grown in pure nutrient solution or in an inert medium.

The NOP issued this statement in direct contradiction to the NOSB recommendation to prohibit organic hydroponic production. The NOSB recommendation was issued after much public discussion and input

from the organic community, whereas the NOP statement was issued without public input and without regard for the accepted process of standards development.

Organic Certifiers' Response

At this time, the USDA's NOP still has not issued a proposed rule or established regulations based on the 2010 NOSB recommendation, nor has the NOP issued guidance to certifiers. This confusing situation means that certifiers must interpret the regulations on their own. This leads to a lack of uniformity, with some ACAs choosing not to certify hydroponic systems as organic because there are no hydroponic standards, while others accept organic hydroponic systems under the current regulations.

At the 2014 Vermont Organic Farmers (VOF) annual meeting, members voted to pass a resolution stating “Vermont Organic Farmers demand that the NOP accept the 2010 NOSB recommendation to prohibit soil-less hydroponic vegetable production as certified organic.” VOF continues not to certify hydroponic operations and publicly supports the “Keep the Soil in Organic” petition (see sidebar).

At the present time, hydroponic growers are achieving organic certification without clear regulations that are specific to their ecological system. This situation needs to be remedied. If organic hydroponic production is to be allowed, the NOSB, with input from the organic community, needs to come to agreement on what type of hydroponic systems are acceptable for organic production.

Organic Hydroponics Around the Globe

The current administration of the National Organic Program continues to allow the certification of hydroponic operations despite the recommendation from the NOSB that clearly states it is not compatible with organic production.

The United States is one of the few countries that allows hydroponics to be labeled organic. Mexico, Canada, Japan, New Zealand, and 24 European countries (including Holland, England, Germany, Italy, France, and Spain) all prohibit hydroponic vegetable production to be sold as organic in their own countries. This means “organic” hydroponic producers in other countries are often growing exclusively for a U.S. market.

Presently, the vast majority of the “hydroponic organic” produce sold in this country is grown in Mexico, Canada, or Holland.

By Nicole Dehne, Certification Administrator, Vermont Organic Farmers



Citizens who expect organic crops to be grown in soil are encouraged to urge the National Organic Program to “Keep the Soil in Organic!” Sign the petition at www.KeepTheSoilInOrganic.org.

“The Organic Hydroponics Dichotomy,” Cornucopia's latest white paper, is available at www.cornucopia/reports.



Bienvenue, Jérôme Rigot

Cornucopia Welcomes New Policy Staff Member

The Cornucopia Institute is pleased to welcome a new staff member to our policy team. Dr. Jérôme Rigot is a Maine-based agricultural researcher and organic certification professional, with broad experience in organic farming, specialty crop production, composting and the culinary arts.

Jérôme holds a doctorate in Agricultural and Environmental Chemistry from the University of California at Davis. The focus of his dissertation was soil bioremediation. He did postdoctoral research at The Ohio State University, where he worked on the optimization of the composting process and led a project looking at the microbial diversity in conventional versus organically managed soils. Jérôme's strong scientific background and his rich and varied experience add to Cornucopia's diverse knowledge base in farm and food policy and agricultural economics.

While pursuing his doctoral and post-doctoral research at UC Davis and Ohio State, both major Land Grant universities, Jérôme witnessed firsthand the detrimental influence

that money from large agricultural and biotechnological interests can have on the objectivity, soundness and integrity of scientific research, and he vowed to pursue work that would not undermine his beliefs in truth and integrity.

Jérôme relocated to Maine in 2012 to help manage a small farm on the state's central coast. He started a thriving business growing micro-greens and specialty crops in an effort to cater to the needs of high-end restaurants, abundant on the coast of Maine. He also started working with MOFGA Certification Services (MCS), the certifying branch of the Maine Organic Farmers and Gardeners Association (MOFGA).

"In that role, I visited many organic farms and was often amazed at the ingenuity and resourcefulness displayed by the farmers to deal with many challenges and to create a healthy living for their family and their customers," Jérôme stated.

Born and raised in the Loire Valley region of France, Jérôme moved with his father to a small farm in southwest France, where he helped raise



Jérôme lives on a five-acre homestead near Bangor, Maine.

free-range lambs and attended an agricultural high school. At age 21 he came to the U.S. and, despite knowing no English, decided to stay. His first job in America was working for a French restaurant in Seattle.

Jérôme now lives on a small homestead farm in Newburgh, Maine, with his partner Renée. In his spare time, he enjoys cooking, baking French (of course) sourdough bread, experimenting with ferments, practicing Tai Chi, beekeeping, vegetable gardening, and swimming in the ocean with his black lab Daisy.

Infographic Shows Spending by Big Food to Defeat GMO Labeling

For the third election cycle in a row, biotech corporations and large agribusinesses narrowly defeated statewide citizen initiatives that would have mandated the labeling of genetically engineered (GE) ingredients on food packages. This time the electoral showdowns took place in Oregon, where it was narrowly defeated, and in Colorado, where the loss was decisive after labeling backers chose to focus their resources on Oregon. The votes sparked a high-stakes bidding war pitting consumer and farmer advocates against multi-billion-dollar biotechnology interests and food industry giants, many of whom own iconic organic brands.

The Cornucopia Institute has released an updated infographic that examines the final dollar totals spent on the 2014 referendums. Big Food interests and their biotech allies opposing the consumer's "right-to-know" outspent the Yes side \$32 million to \$12 million in Colorado and Oregon. Over the past three years, including the previous referendums in California (2012) and Washington (2013), corporate interests have outspent the pro-labeling supporters \$100 million to \$29 million. To download the infographic, scroll down the right side of the home page at www.cornucopia.org.





THE CORNUCOPIA FARMER PROFILE

Urban Ag in the Heartland

BY ELIZABETH WOLF

Say “farm” and, despite the spread of industrial-scale agriculture, images of red barns, lone farmhouses and acres of crops growing in the country come to mind. Yet as the world becomes increasingly urbanized (over 80% of Americans live in cities), so too has food production. In fact, the USDA estimates that 15% of the world’s food supply is now grown in urban centers.

Whether via community gardens, vacant lots, backyards, front yards, municipal orchards, patio containers, rooftop gardens, window boxes, indoor systems or other means, urban agriculture is a growing trend—or, more accurately, a returning practice. Long before WWII victory gardens grew 40% of all vegetables in the U.S., from ancient times cities have produced at least some food within their borders.

Big Muddy Urban Farm is reviving this tradition in Omaha, Nebraska. Founded in the winter of 2011 by a group of friends, all in their 20s, the farm is now a collective of seven producers, aided by volunteers from the ‘hood and local schools. The growers raise fruit, vegetables, herbs and chickens at five sites within a three-mile radius. Long an area blighted by abandoned buildings, drug use, and crime, the Gifford Park neighborhood is now turning around. “The neighbors love the gardens,” says Brent Lubbert, one of the founders and now the farm manager. “They love to see the plants grow and stop to watch the chickens.”

Big Muddy, the nickname of the nearby Missouri River, offers a distinct alternative to “Big Money.” Grassroots from the get-go, the farm’s start-up funds came from CSA shares sold before the first seeds were sown. The landowners, growers themselves, gave the use of the vacant lots rent-free if the farmers promised to grow food and sell it at the neighborhood farmers market. Four seasons later, they do so each Friday evening spring through fall, equipped with a retrofitted industrial fridge on wheels they use as a cooler.

The CSA is still going strong, with about 30 members. Surplus is sold to local restaurants. Big Muddy also offers “community shares” that benefit Table Grace, a pay-what-you-can café that turns no one away.



Big Muddy Urban Farm producers (l to r) Matt Cronin, Ali Clark, Brent Lubbert and Brandon Sperry

Big Muddy grows without pesticides or synthetic chemicals and works to improve the soil. On their first plot, raised beds above the lead-contaminated earth grow greens and minimize stoop labor. At the historic Joslyn Castle, the growers are cultivating the land originally used for the mansion’s kitchen garden. Big Muddy also has a plot in a community garden, a seed-to-table demo project for kids. Last year’s “pizza garden” was a big

hit. This year’s crop of cabbage will fuel later workshops on fermented foods. On the fifth site, a house burned down and the ground needs work. “I’d rather know how to bring soil back to life rather than just be given good soil,” says Brent. “It’s a good skill to have.”

Big Muddy is also renovating a large old home in the neighborhood. Their “farmhouse in the city” will house apprentices and deepen the collective’s bonds.

For the growers, urban farming is as much about education as it is about food. Deeply concerned about the state of the food system, the collective wants to foster community resilience, empowerment, and a more localized economy.

“We need more farmers in our society,” says Brent, citing the legions of producers approaching retirement and too few young people to fill their shoes. “If you keep food production on the outskirts, it’s out of sight, out of mind. But when people see food being grown, they understand it’s a viable thing to do in a city.”

To share that message, Brent and his friend and fellow Omahan Dan Susman made the award-winning documentary *Growing Cities* showcasing dozens of urban ag initiatives across the country. Crowdfunded through Kickstarter, the film has shown on over 80 PBS channels so far.

The message of both Big Muddy and the film is one of hope and action. Says Brent, “In this period of doom and gloom environmentally, there are projects out there that are turning that doom around. You can do that, too.”



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Organic: What Does It Mean?



Photo courtesy of Englebert Farms

What does *organic* look like to you? Happy cows grazing on green meadows? Free-range chickens scratching for bugs? Unmolested crops growing in rich, fertile soil? Or do you see massive industrial-scale operations confining thousands of animals with little to no access to fresh air and sunshine? Or vegetables growing in water or another soil-less medium? The very definition of organics is in question. The Cornucopia Institute and our 10,000 members are taking a stand for true organic principles. See related stories inside.

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You Can Influence Organic Policy

By law, the National Organic Standards Board (NOSB) must review every substance on the *National List of Allowed and Prohibited Substances* every five years. Called the Sunset Review, this ensures that each material continues to meet the criteria stated in the Organic Foods Production Act of 1990.

The 2017 sunset materials up for discussion at this year's NOSB meetings include the majority of materials on the National List. **This means over 200 materials are up for review at the upcoming Spring and Fall NOSB meetings!**

The Cornucopia Institute is concerned that the NOSB's workload will exceed the board members' ability to complete their duties, which include a thorough review of each material up for sunset.

Help us make recommendations on the 2015 Spring/Fall NOSB work agendas (<http://tinyurl.com/pd7eutw>) by sharing your experience.

For example, has your farm, or a farm you know of, been contaminated with herbicides from composting conventional hay or manure? If so, your comment will help us comment on the discussion of "Contamination of Farm Inputs."

Do you have a safe method for controlling gophers? Your comment may help determine whether or not "exhaust gas" is added to the National List for use in controlling burrowing rodents.

These are just two of the hot topics that will be discussed at the upcoming NOSB meetings. If you have feedback on any of the materials or discussions on the agenda, The Cornucopia Institute wants to hear from you! Send all comments to dixon@cornucopia.org by March 25, or comment directly to the NOSB during their open comment period, March 9 through April 6.

And watch for Cornucopia's live coverage of the Spring NOSB meeting, April 27-30, on Twitter, Facebook and our website, www.cornucopia.org.

—LINLEY DIXON