Out of the Soi Organic and the "H-word"

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Out of the Soil: Organic and the "H-word"

Talk to 15 different people, and you'll get 15 different opinions on hydroponics. ... Discussing hydroponics within the organic sector is confusing at best, taboo and polarizing at worst.

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CCOF Certification Services is now offering PrimusGFS food safety certifications for organic producers! CCOF is accepting applications from farmers, coolers/distributors, harvest crews, packinghouses, and processors of produce. Learn more at <u>www.ccof.org/foodsafety</u> or email <u>foodsafety@ccof.org</u>.



Discussing Organic & Hydroponics

Food historian, story teller, and organic advocate Liz Birnbaum bravely writes about the most controversial word in the organic community today-"hydroponics."

Over the last six months, Liz has steeped herself in the history of hydroponics and talked with her personal friends and mentors in the organic community, along with various organic producers using hydroponic or novel growing methods. She shares what she has heard, learned, and experienced in this month's feature article, "Out of the Soil: Organic and the 'H-word."

For those who don't know, "hydroponic" elicits strong feelings, to say the least, among many in the organic community. Some folks feel that organic principles can and should be applied to hydroponic production systems. If these food production systems are going to continue to rise because of their land, water, and labor savings, then they should use organic principles to foster biodiversity, protect natural resources, and eliminate the use of cancer-causing pesticides.

But others see organic hydroponic as an oxymoron. The founding textbooks on organic agriculture clearly called for building soil health as the premise to all organic production. So how can you call a soilless production system "organic?"

One theme that I often notice in this debate is that the word "hydroponic" frequently elicits an image of conventional, sterile growing environments. But in our experience, certified organic growers who use hydroponic, container, or other novel systems don't fit this typical image–they often grow in spaces brimming with biodiversity and manage intense nutrient cycling plans. They tend to be among the most ardent defenders of organic principles, care deeply for their employees and communities, and use growing methods that are anything but conventional.

So, we asked Liz to take a journey through the history of hydroponics and share more with us about what these systems have meant and may mean to our community. While you won't find any conclusive argument in this article, you will find a human-centered and thoughtful approach that sheds new light on the history of hydroponic and what the word may mean for our community today.

Certified Organic Is Going on Hiatus!

Over the coming months, we'll be taking a deep dive to consider what we publish and how we can use those resources to better serve the organic community. During that time, CCOF is pausing magazine production.

Fear not! You can still keep in touch with us during the magazine's vacation by subscribing to the CCOF Newsletter at <u>www.ccof.org/subscribe</u>. Get blog posts, certification news, and events delivered to your inbox weekly.

Have thoughts to share with us about *Certified Organic* magazine? Get in touch at <u>ccof@ccof.org</u>.



Kelly Damewood CCOF CEO

Issue Contributors

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For over a decade, **Liz Birnbaum** has dedicated her work and life to photography, food, and stories. Birnbaum started her career in the forests and farms around Chicago, then moved to California, where she managed the EcoFarm Conference. Her work has threaded a tapestry of agricultural and culinary interests, including traveling to Italy as a U.S. delegate for Slow Food, raising money for organic research, and turning her favorite party trick into a business: The Curated Feast. She has photographed an award-winning book for Ten Speed Press (*Fruit Trees for Every Season*, 2019), collaborated with Instagram powerhouse, the feed, to document their culinary travel experiences, and shot in Michelin-starred kitchens. When she founded The Curated Feast, Birnbaum was hosting artfully themed dinners that connected food with folklore, mythology, art, and history. A few years later, she shifted to helping businesses tell their stories. Learn more at <u>www.thecuratedfeast.org</u>.

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foundation **PROGRAMS**



These CCOF organic transition grantees are part of the growing organic community.

Focusing on Organic Transition

Farmers huddle over organic system plans at kitchen tables. They traverse fields in groups, talking about new varieties of organic seed and how their cover crop fared over the winter. They look over specialized equipment in a cold barn on a February morning, discussing its merits. This is how learning happens.

CCOF has focused on organic transition since our inception. Beginning in the early 1970s, CCOF members supported each other in person, on the phone, and through letter correspondence as together they figured out how to grow crops organically. In the early 2000s, the Going Organic Project organized over 60 field days and supported the organic transition of thousands of acres. Most recently, CCOF partnered with Anheuser-Busch to support the transition of 100,000 acres of farmland across all 50 states.

Over the past 50 years, CCOF and our members have learned some core truths about success in organic farmer education and about how best to support farmers as they transition to organic.

We know that farmers learn best when they are talking to other farmers. In education theory, this is called a "zone of proximal development," which is a fancy way of saying that humans most effectively learn from people with similar life experiences. In keeping with this theory, we at CCOF design programs where transitioning farmers have community support and mentorship to aid the transition. We make sure that farmers in transition meet people like themselves who have succeeded and are glad they made the transition.

We know that financial stability supports farmers as they transition to organic, so we provide direct grant funds. In 2020, the CCOF Foundation gave \$500,000 to farmers in transition, supporting dozens of operations across the United States as they invested in their soil, seeds, and machinery. In 2022, the Foundation will give another \$200,000 to \$300,000 in transition support.

We know that transitioning farmers are more successful when they have professional technical support in key areas like agronomy, growing techniques, and business skills, so we collaborate with cooperative extension, nonprofit partners, researchers, and agricultural professionals to provide technical consultation for our educational programs.

Lastly, we know that transitioning farmers need to have a new market for their product. This keeps existing organic growers succeeding while also creating opportunities for those operations looking to transition additional land. That's why we build our organic transition programs together with purchasers ready to provide new market opportunities.

In each of these focus areas—social, financial, technical, and marketing—we design programs that are based on need. We recognize and uplift existing community expertise. We partner with community-based groups to design curricula that are relevant to what the farming population needs. We pay experienced organic farmers to provide farmer-to-farmer mentorship and education.

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Organic Transition Program (OTP) Components



Figure 1. CCOF Foundation Organic Transition Theory of Change

The long-term outcome of all organic transition work is that farmers, consumers, and communities reap the economic, environmental, and social benefits that come with organic agriculture and create solutions to climate change, economic insecurity, and health inequities. (Visit <u>www.ccof.org/roadmap</u> to learn more.) CCOF envisions a world where organic is the norm; therefore, we need to keep existing farmers successful and create opportunities for conventional farmers to transition land into organic production.

One of CCOF's new five-year goals is to launch bold strategies to increase the amount of farmland under organic production and grow the market for organic food and goods. Our organic transition work supports both parts of this goal by increasing organic farmland and growing the market.

For the next three years, CCOF will work with a community of farmworkers in the Central Coast of California who are on the long path to farm ownership. Most of these farmworkers hail from Mexico, and most have long family histories of farming and farm ownership in their home country. Each year, aspiring to a better life, dozens of farmworkers in the Salinas Valley pursue educational opportunities to develop farm business skills in hopes of starting small-scale organic farms. With surprisingly small capital investments, this community has established flourishing small-scale organic farms. Currently, CCOF certifies over 70 organic farms in the Central Coast started by former farmworkers.

Why work within this community?

Need. Former farmworkers typically lack adequate capital to invest in their soil and start stable regenerative organic farms. Our \$10,000 organic transition grants will make a huge difference to these small operations.

Established partnerships. CCOF has developed relationships with local organizations such as California FarmLink, the Agriculture and Land-Based Training Association (ALBA), and Kitchen Table Advisors, who will provide the integral technical support necessary to make this program successful.

Community. There are many established organic farmers in this area to provide mentorship to beginning farm owners.

Market. This program's partners include distributors, shippers, processor/handlers, and restaurants. Offerings include distribution support as well as multiyear purchasing agreements for transitioning growers.

Partners

Agriculture and Land-Based Training Association (ALBA)

Agriculture and Land-Based Training Association's (<u>www.albafarmers.org</u>) Farmer Education and Enterprise Development project builds the organic farming skills of immigrant farmworkers to support a more equitable and environmentally sustainable agriculture sector. The project leverages ALBA's experienced bilingual and bicultural staff, a proven consortium of farm service providers, and a 200-acre certified organic farm training facility in the Salinas Valley.

Each year, some 75 limited-resource farmers gain affordable access to education, land, farming equipment, and technical assistance. Through hands-on, land-based learning, they develop organic production and business management skills to pursue the dream of farm ownership.

ALBA has a proven track record of helping farmworkers become farm owners. Eighty percent of Monterey County's

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Latinx organic farmers are ALBA graduates! ALBA alumni often form farm cooperatives to increase their land holdings and capability for success. Frequently, these graduates farm with their families, which further strengthens the communities' deep connections to the land and food system.

CCOF has a long and successful history of supporting ALBA farmers through our Organic Training Institute and our Future Organic Farmers program. Since 2014, we've codesigned educational programs about organic transition and certification, and we've supported at least one student a year with grant funding from our Future Organic Farmers granting program. In 2020, the CCOF Foundation supported three ALBA farmers with grant funding, including Adelio Coronel, who has already begun the three-year process to certify his half-acre farm with CCOF.

California FarmLink

California FarmLink's (<u>www.californiafarmlink.org</u>) mission is to invest in the prosperity of farmers and ranchers through lending, educating, and promoting access to land. Knowledge, capital, and land are the foundations of sustainable farm businesses that can create wealth while conserving and enhancing natural resources. California FarmLink believes that successful farm and ranch businesses can support rural communities, as well as local food systems, jobs with living wages, and a healthy environment.

Established in 1999, FarmLink works across California, with a focus on serving farmers of color and beginning and sustainable farmers. They partner with farm training programs, impact investors, public agencies, and other nonprofits, weaving an ecosystem of support for nextgeneration farmers and ranchers. California FarmLink is certified as a Community Development Financial Institution (CDFI), one of the first in the nation focused on sustainable and organic agriculture as well as economic and environmental resilience. California FarmLink will provide education about land access and financial literacy.

Kitchen Table Advisors

Kitchen Table Advisors (KTA) fuels the economic viability of small, sustainable farms and ranches through practical business advising and relationship building. KTA's work focuses on both directly supporting farmers and ranchers as well as shifting the ecosystem within which they operate to be more inclusive of their agricultural practices and their lived experiences. Kitchen Table Advisors provides personalized bilingual business advising to our client farmers and ranchers through a three-year advising program.

The CCOF Foundation's ORGANIC TRAINING INSTITUTE



Through trainings, workshops, and seminars, the Organic Training Institute provides intentional education to aspiring and current organic professionals.

Our online educational offerings for the first half of 2022 include

- food safety webinars for small and mediumsized organic processors
- Food Safety Modernization Act (FSMA) food safety webinars for organic growers

Learn more about upcoming Organic Training Institute events at <u>www.ccof.org/oti</u> »

You can check out our webinar recordings on the CCOF YouTube channel. Popular recordings include

- Current Good Manufacturing Practices (cGMPs)
- FSMA 101 for Organic Processors
- Organic Labeling and Marketing Strategies for Meat Producers
- Farm and Food Business Marketing Collaborations

View recordings of past webinars and follow our YouTube channel at <u>www.ccof.org/youtube</u> »

The Organic Training Institute's 2022 events are supported in part by funding from private donors, the California Department of Food and Agriculture, and the U.S. Department of Agriculture's National Institute of Food and Agriculture and National Organic Program.

organic ADVOCACY



Organic Advocacy for CCOF Members

CCOF offers a unique member benefit: organic advocacy on behalf of CCOF members.

The CCOF policy team responds to member needs for intervention in regulatory and public policy issues and seeks opportunities during legislative sessions for organic to be recognized as a key part of the solution to many of society's most pressing problems, including climate change. Here is a look at what CCOF's policy team accomplished through the end of 2021 and a glimpse into emerging issues for 2022.

AB 888 Signed Into Law

In response to a need articulated by organic livestock producers, CCOF Policy Research Specialist Laetitia Benador is leading a multifaceted Meat Matters campaign that seeks to remove obstacles livestock producers encounter in producing and processing organic meat.

CCOF co-founded the California Meat Processing Coalition to create solutions that expand meat processing capacity across the state and to weigh in on federal policy and funding opportunities. In 2021, the Coalition took immediate steps to increase on-farm slaughter options in California.

The Coalition successfully advocated for the passage of AB 888, Mobile Slaughter Operations: Livestock, authored by Assemblymember Marc Levine of Marin County, which allows producers to sell any number of live cattle, goats, sheep, and swine to local buyers and have them slaughtered by a federally exempt Mobile Slaughter Operator (MSO) on the ranch where they were raised. The meat is not destined for retail markets, but instead is pre-sold on the hoof before slaughter. These types of transactions, referred to as "herdshare" arrangements, were first legalized for cattle ranchers in 2018 with the passage of AB 2114 and are now expanded to include goats, sheep, and swine with AB 888.

CCOF and the Coalition are also building toward broader meat processing reforms that can address the large and complex scope of the meat processing bottleneck. The Coalition supported the University of California, Davis Food Systems Lab in conducting a year-long study of California's meat processing landscape. The report, *A New Era for Meat Processing in California? Challenges and Opportunities to Enhance Resilience*, was released in September 2021.

Thank you to CCOF members Jason Walker, Michael Evenson, James Rickert, Julie Morris, Sallie Calhoun, Kaley Grimland de Mendoza, Dru Rivers, and Craig Thompson, whose feedback greatly contributed to the research. The study recommends five main ways to increase producers' access to meat processing across the state. These include upgrading and expanding infrastructure, addressing water and waste regulations, training workforces, expanding inspection options, and building market opportunities.

With a milestone under our belt and new research in hand, CCOF and our partners are launching the next phase of our Meat Matters campaign in 2022, focusing on brick-and-mortar slaughter and cut-and-wrap processing. We will continue our work with the California Department of Food and Agriculture (CDFA) to implement the new on-farm slaughter allowances. CCOF's policy team wants to hear from you! Please send your policy interests or concerns to <u>policy@ccof.org</u>.

\$7 Million for Organic Transition in State Budget

In the summer issue, we reported that CCOF was working with a coalition of food, farm, climate, health, and justice organizations to advocate for investment in food system resilience through AB 125. This effort included pursuing support for organic research and technical assistance and for organic procurement, an organic transition program, and meat processing infrastructure. With a state budget surplus this year, we were able to work with the legislature to secure elements of AB 125 through the budget process, including \$7 million for organic transition.

The policy team is now focused on how these dollars will be spent. We are advocating for a comprehensive organic transition program that includes the following:

- Transition grants that support farmers and ranchers to build soils and biologically manage pests while offsetting the economic risk of transitioning to organic production
- Investment in mentorship of transitioning farmers and ranchers by seasoned organic producers
- Research, education, and technical assistance grants that build the capacity of technical assistance providers to support transitioning farmers and ranchers with resources that are culturally and linguistically appropriate
- Regional food system grants that expand local markets for organic food, creating more opportunities for new and existing organic farmers and ranchers

An organic transition program is one more tool in the climate smart agriculture toolbox. We know that farmers and ranchers need a range of tools as they face increased risk from wildfire and drought.

Tackling Challenges Faced by Organic Processors

In 2016, CCOF worked with Assemblymember Mark Stone to introduce and pass AB 1826, the California Organic Food and Farming Act, which updated California's Food and Agriculture Code that regulates organic farming through the State Organic Program. AB 1826 focused on the part of the program managed by CDFA but did not update language in the Health and Safety Code, which authorizes the California Department of Public Health (CDPH) to regulate organic processors.

The policy team has reached out to CCOF's Processor/Handler Chapter to understand the challenges they face. Top issues include a paper-based registration and payment system; multiple redundant application forms; the deposit of organic registration fees into the General Food Safety Fund; and an inconsistent process for resolving complaints. We are working with CDPH to better understand these challenges and create a path forward. Look for updates on this effort through the CCOF weekly newsletter–subscribe at <u>www.ccof.org/subscribe</u>.

COPAC Approves Proposal To Fund Organic Research and Extension

The California Organic Products Advisory Committee (COPAC)– which, under state law, advises the Secretary of Food and Agriculture on organic regulations and education, outreach, and technical assistance for producers–created a subcommittee in spring 2021 to develop ideas on how to spend approximately \$1 million in excess funds over the cost of the program paid into the State Organic Program.

The Fund Condition Subcommittee discussed numerous possible scenarios, including returning the money to farmers, advertising the benefits of organic, and investing in racial equity programs. Ultimately, COPAC voted to recommend CDFA spend \$1 million on organic research and cooperative extension by investing half of the funds into supporting the sole University of California organic production specialist over the next five years and the other half into the Organic Research Endowment for the University of California Organic Agriculture Institute. The organic production specialist position is currently held by longtime organic researcher and farm co-operator, Joji Muramoto. Investment in organic research and extension will benefit the entire organic farming community.

CCOF's policy team will monitor follow-up and implementation of this important recommendation and will keep members posted.

A 2022 Focus: Prepping for the Farm Bill

On the federal front, CCOF will be working with state and national coalition partners to advocate for organic provisions in the anticipated 2023 Farm Bill. We will be advocating for the following organic priorities:

- Reinstatement of the Organic Certification Cost Share Program
- A federal organic transition support program
- Acknowledgement of and support for organic agriculture as a key strategy in combatting climate change
- Increased funding for conservation programs

CCOF's policy team wants to hear from you! Please send your policy interests or concerns to <u>policy@ccof.org</u>.





Out of the Soil

Organic and the "H-word"

WRITTEN AND PHOTOGRAPHED BY Liz Birnbaum

Talk to 15 different people, and you'll get 15 different opinions on hydroponics.

Ask those who've helped create, codify, and continue national organic standards, and you'll get just as many varied beliefs about how hydroponic fits (or doesn't) within organic principles. Discussing hydroponics within the organic sector is confusing at best, taboo and polarizing at worst.

To begin with, what does the term "hydroponic" really mean? Any growing technique not within the crust of the earth? Some might simply call it "soilless," but in some cases, "soil-minimal" or "container-based" is far more accurate. What about raised bed gardening, urban farms, and mushroom production?

And the big one: Does hydroponic fit within the ethos and standards of organic? Each question I pursued gave way to even more complexities. While some believe that closed-system farming steers us away from the immense importance of soil carbon sequestration and regenerative agriculture, soilless and soil-minimal growing methods have the potential to feed the world's ever-growing, ever-hungering population.

Over the past six months, I visited three certified organic farms that grow in unique ways, spoke with those who advocate on all sides of the topic, and remained open and curious about the elusive "H-word" as I waded through it all.¹

Like so many questions surrounding agriculture, the H-word asks us to grapple with vast structural inequalities in land access, environmental justice, and equity. As I explored this mostly uncharted side of agricultural history, I realized that this topic is complex from every angle–and that perhaps the urge to draw straight lines around organic is actually what's keeping people from seeing common ground in the first place.

Defining "Hydroponic"

If you were hoping for a simple definition, don't look for it here. After many months of exploring this sector, the should-be-simple task of defining the term still feels slippery.

First, the technical USDA definition: "Growing plants in a nutrient solution root medium." Vague, at best. Another effort to define hydroponics comes from the National Organic Program: "The production of normally terrestrial, vascular plants in nutrient rich solutions or in an inert, porous, solid matrix bathed in nutrient rich solutions." This definition

¹This is a nod to Mark Lipson's Searching for the "O-word," a seminal piece on organic policy that I have learned from in my career. Lipson, M. (1997). Searching for the "O-word": Analyzing the USDA current research information system for pertinence to organic farming. Santa Cruz, CA: Organic Farming Research Foundation

While some don't see a place for high-tech, closed-system farming within organic, others strongly stand by it as a solution to food insecurity and climate crisis.

would apply to methods like growing on coconut coir mixes in containers, but doesn't offer any real clarity. Then there's "bioponic," a newer umbrella term for anything other than "traditional" in-ground soil systems, including soilless, container, aquaponic, and other alternative systems. This is the term I felt best encompassed the complexity at hand, and for this article, I spoke with farmers using a variety of bioponic growing methods.

So how did the term "hydroponic" come about in the first place?

In the late 1920s, Dr. William F. Gericke, a plant physiologist at The University of California, Berkeley, used his plant nutrition laboratory to trial crops for large-scale commercial applications. He is credited with coining the term "hydroponics" from the Greek words *hydro* (water) and *ponos* (labor), literally translating to "water-working."²

The success of Dr. Gericke's plants garnered national press. Headlines included "Grows Plants in Water: Chemicals Better Than Soil, Expert Says" and "Can Grow Plants Without Soil!"³ The celebration of Gericke's success was soon eclipsed by the public's desire to replicate it, and a hydroponics craze ensued, leading the way for many of the growing styles we see in indoor greenhouse technologies today.

In *Popular Science Monthly* (1929), Dr. Gericke proclaimed the grand vision of his invention: "This, it seems to me, is the greatest value of the five years of experiments we have been conducting–that millions may be fed from water, on soils that hitherto have produced nothing but an occasional clump of cacti, or a few fig trees."⁴

While some don't see a place for high-tech, closed-system farming within organic, others strongly stand by it as a solution to food insecurity and climate crisis. But as the adage (roughly) goes, if we want to understand the future, we first have to study the past.

A Not-So-Modern Technology

Humans have been using hydroponic methods for longer than one might expect; early forms of hydroponics, such as soilless, low-soil, and water-based growing systems, have been around for centuries. Farming, food, and textile production were adapted where soil farming wasn't an option due to limited land availability, politics, climate, or any number of other factors.

The Aztecs' floating *chinampas* were raft-like mats made of tightly woven reed and sediment, through which plant roots absorbed lake water. The then-nomadic Aztec people developed this system out of necessity, having been denied farmland by the powerful Toltec Empire that preceded them. They grew bountiful harvests on Lake Tenochtitlan in the central valley of what is now Mexico.

Their gardens were so successful that the Aztecs continued to use the technique even after they rose to power, feeding entire cities on their raft-grown fruits and vegetables.⁵ Today, a collective of farmers and chefs in Mexico City's Xochimilco district (a UNESCO World Heritage Site south of the city center) is working to revive the 1,300-year-old tradition of the *chinampas*.⁶

Other examples of hydroponic or soilless farming techniques throughout history include the Roman Emperor Tiberius' "raised beds made in frames upon wheels," set within a protogreenhouse (called a *specularium*), where he grew cucumbers year-round.⁷ In ancient China, farmers first grew rice in dry soil-until seasonal flooding revealed the crop's ability to thrive in standing water, with less pressure from pests and diseases. Marshy paddies became the way to grow rice.⁸ Ancient Hawaiians grew taro on flooded terraces with fresh stream water amended with a compost mixture of sugar cane, coconut leaves, and decomposing branches.⁹ Inle Lake in Myanmar is filled with floating gardens created from clumps of water hyacinth and seagrass and secured in place with bamboo poles-a growing technique called ye-chan. Quite a recent technique, ye-chan likely dates back to just the 19th century, gaining major popularity in the 1960s. According to NASA Earth Observatory, its use increased by 500 percent between 1992 and 2009.10

While these historical techniques illustrate that agriculture hasn't always depended on soil-bound methods, the specific circumstances that inspired each of these techniques are complex. We must be cautious when comparing these ancient and indigenous systems to modern-day hydroponic operations. It's simply impossible to talk about agriculture (hydroponic

²The history of hydroponics. (2001). The Natural Farmer. https://thenaturalfarmer.org/article/the-history-of-hydroponics/

³Edwards, J. (n.d.) Hydroponics history part 2: The birth of hydroponics. *Hydroponic Gardening*. http://hydroponicgardening.com/history-of-hydroponics/the-birth-of-hydroponics/

⁴Dunn, H. H. (1929, October). Plant "pills" grow bumper crops. *Popular Science Monthly*.

⁵Folds, E. (2018, March 10). The history of hydroponics. *Medium*. https://medium.com/@evanfolds/the-history-of-hydroponics-99eb6628d205#:~:text=The%20first%20 known%20instance%20of,rich%20in%20and%20and%20minerals

⁷Pliny. (1856). The natural history of Pliny. (J. Bostock & H. T. Riley, Trans.) London: Henry G. Bohn.

⁸Stephens, Oscar. (2019, February 14). A brief history of hydroponics. *The Hydroponics Planet*. https://thehydroponicsplanet.com/a-brief-history-of-hydroponics/ ⁹Taro. (n.d.) *Hawaii History*. http://www.hawaiihistory.org/index.cfm?fuseaction=ig.page&PageID=533

¹⁰Floating farms. (2015). Earth Observatory. NASA. https://earthobservatory.nasa.gov/images/85606/floating-farms

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⁶Pett, S., & Ashtari, L. (2019, December 9). The last floating farms of Mexico City. *Modern Farmer*. https://modernfarmer.com/2019/12/photo-essay-the-last-floating-farms-of-mexico-city/



or otherwise) without considering how colonization and industrialization shaped the industry we know today.

Innovation and Organic Values

High above the urban bustle of cars and commerce in Berkley, California, pollinators buzz over a rainbow of blooming flowers.

"There's a lot of life up here," says Joanna Letz, founder of Bluma Farms, a verdant quarter-acre rooftop garden where she grows organic cut flowers and culinary herbs. Letz farms far above terrestrial soil, but she holds close to her heart the organic principles she learned from organic pioneer "Amigo" Bob Cantisano as the foundation of her career and values. "We are able to grow so much up here in this small space," Letz says. "There is no compelling reason not to do it."



have the same privilege of land opportunity that [landowners] do. If you're a family that lives in New York, South Los Angeles ... your opportunity to that land is nil, and it's getting harder and harder to come by"

Colin Archipley and his wife Karen grow what they call "hydroorganic" at their farm near San Diego. The Archipleys were growing organic crops hydroponically and in greenhouses before they knew about the controversy that would soon knock at their door.

"We have this environmental issue of water constraints, high cost of land, high cost of energy, [and] growing cost of labor. That drove our production system," says Colin, a former Marine sergeant who uses farming to support other veterans as they transition home from deployment. "Why would we want to pause the evolution of production systems, particularly with the restraints that we have going forward? I think the organic industry is on the forefront of sustainability, and it should stay that way."

Land access and food security are also on Archipley's mind when he thinks about soilless systems. He sees that hydroponics offer a potential path for "producers who don't A-dae Briones, who directs Native Agriculture and Food Systems programs at the First Nations Development Institute, has been working with indigenous communities and indigenous-led nonprofits for years. By her own estimation, she's at least a 45th-generation farmer.

While serving on the National Organic Standards Board, she participated in the 2017 vote that resulted in allowing hydroponics—a decision she thought she stood against. But as proceedings unfolded, Briones realized she couldn't fully align with the idea that hydroponic systems should be excluded from organic certification.

"The two comments we got from the Tribal communities said, 'We need hydro to be certified ... that's the only way we're going to meet food safety to get into schools," Briones remembers.





And she also remembers the tension and turbulence around the vote.

"There's no middle ground in this conversation," she says. "And, quite frankly, I came into [it] very sure that I was going to vote against hydroponic certification because in my community, we believe in the power of the land; we believe in the spirit of the soil; we believe in the spirit of the water."

What kind of innovative solutions–especially those that respond to drought, flooding, and unpredictable weather patterns–might be squashed if organic begins to exclude growers whose livelihoods depend on these methods and who lack access to crucial markets, healthy food, and food security?

"I can't tell you about processes without people. We're just creating more inequality in systems if you do that," Briones says. "When you take the person out of the conversation, you take those histories out."

Third-generation farmers Theojary "Theo" Crisantes Sr. and Ricardo Crisantes of Wholesum Farms currently support over 1 million square feet of greenhouses at their Southern



Arizona location alone. Their company grows 225 acres, both in-ground and indoors, between locations in the United States and Mexico. While their Arizona greenhouses might look a bit futuristic at first glance, their methods actually emerged from a century of accumulated knowledge refined over three generations.

"Once you take [on organic] responsibility," says Ricardo Crisantes, "then it starts shining the light on other areas of your business where you can be even more responsible. It goes from not using pesticides to really thinking, How am I responsible to this whole ecosystem around me? Energy matters. Waste matters. The people who work in the fields matter a lot. How you package your produce matters."

Wholesum's work focuses on sustainability and organic guidelines, and it's also rooted in principles of social responsibility, energy efficiency, and employee empowerment.

The story of values, ethics, and pragmatism was a common thread between all the farmers I spoke with. They passionately identify as organic and value being part of the robust organic community; it's part of who they are and why they do what they do.

Hydroponic Roots in Organic

The roots of the hydroponic versus organic debate can be traced to organic's very first days. In fact, organic alfalfa sprouts grown in trays of water were a mainstay of organic produce sections in the 1980s.

Yet some argue that comparing those water-grown alfalfa sprouts to modern hydroponic operations is a false equivalency, particularly because alfalfa sprouts are germinated seeds that are not intended to root in soil like other terrestrial plants. If we believe that all dedicated organic farmers want the same thing to grow more, feed the world, and do it more harmoniously with the planet—then hopefully the organic table is big enough to seat everyone.

According to CCOF, identifying exactly when hydroponic methods were first included in organic certification may be an impossible task that depends on how you define the term. Delineating which production methods should be grouped in with hydroponics is an ever-shifting, subjective task.

"The phrase 'original intent of organic' is misleading in itself," says Mark Lipson, longtime farmer and organic policy expert. "We were very aware of what we didn't really know," he says when reflecting on his leadership role in the early organic movement in the United States. "We did think of ourselves as defenders of the land and soil health, but more than anything, it was protecting [the environment] from poison." Their primary goal was to eliminate applications that are now known to cause devastating health effects to humans, wildlife, and ecosystems.

Folks who are wary of including hydroponics in organic certification don't all stick to the same party line. They, too, are a diverse group of passionate people who see an urgent need for the regulation of hydroponics. They are fighting not only for soil health, but also for consumer trust and, as they see it, the future of organic farming.

Paul Muller, a partner at Full Belly Farm and an organic advocate with decades of expertise, firmly believes that the essence of organic is soil health–and the health of the food and the people who eat it. In his nearly 40 years working the soil at Full Belly and leading the way for organic adoption throughout the Capay Valley, he's come to appreciate organic farming as a "whole system" practice. After growing up on a conventional farm that used toxic insecticides and pesticides, Muller is utterly committed to long-term sustainable solutions for humans and the planet.

"People said it was impossible to grow [organically]. What it did was engender an immense amount of respect for the complexity of soil," Muller remembers. Conventional agriculture, according to Muller, is more about input and output; organic means understanding the relationship between farmers, crops, soil, ecosystems, and wildlife.

He sees the hydroponic model as an isolated, controlled, almost transactional method that is the polar opposite of what he and many others feel is the core purpose of organic. "It's not values-driven," Muller says. "If the bulk of nutrients come from solution [as opposed to soil], and the roots of those plants are somehow disconnected from bedrock and the earth down below themselves, they are shut off from being rooted deep." Many who question hydroponics' place in organic frame their conviction as an urgent fight to restore what conventional agriculture strips from the earth.

As closed systems become an inevitable fact of our modern world, one potential solution is the creation of a "hydro-organic" label for terrestrial crops not grown in the earth's soil. Could this be the compromise that allows bioponics to be certified organic while providing transparency for consumers and clarity for farmers?

From CCOF's perspective as a certifier, it always comes back to the question of integrity. "I believe that sterile, nutrientdepleted systems do not belong in organic, and I commend all the advocates working hard to keep conventional-like systems from penetrating the organic label. But CCOF only certifies soilless systems that uphold organic principles by cultivating biodiversity, cycling nutrients, and protecting natural resources," explains Kelly Damewood, CCOF's CEO. "Plus, we uphold soil health principles by applying the same rigor, scrutiny, and principles to hydroponic and container systems for terrestrial crops that we have always applied to transplants, mushrooms, sprouts, and other soilless systems that are widely accepted under the organic label. In my experience, certified organic hydro or container growers care deeply about soil health principles and about protecting organic integrity."

When Challenges Arise, Farmers Innovate

Embracing a "both-and" perspective is a rare feat in today's world, and that may be exactly what's needed to find solutions in this conversation. This particular battle is a microcosm illustrating the inherent conflict that comes along with any innovation. The fact is, organic farmers around the world have been using and will continue to incorporate these techniques and traditions to sustain and improve their operations.

This debate brings to mind a much broader question about progress and preservation: Do we hold tight to tradition in order to see our ambitions realized, or is it more important to be adaptable?

It's not just the facts of hydroponics that are complex and ever-changing-it's the entire timeline of human agricultural technologies that is in flux. Complexity can be scary; it's easy to wish for clear definitions, guidelines, and histories. If we believe that all dedicated organic farmers want the same thing-to grow more, feed the world, and do it more harmoniously with the planet-then hopefully the organic table is big enough to seat everyone.

certification **NEWS**

Fee and Process Improvements for Farms Adding New Parcels

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CCOF maintains low, competitive annual certification fees by charging modest administrative fees for additional services such as adding or transferring parcels.

We are implementing process and fee improvements for clients adding new parcels, effective January 1, 2022. See our Add Acreage Instructions (<u>www.ccof.org/</u> <u>resource/add-acreage-instructions</u>) for full details.

- The add acreage fee will be streamlined to a base fee of \$125 per new parcel to align with all other additional service fees and allow clients to better project certification expenses.
- Add acreages must be submitted to and reviewed by the CCOF office before they can be included in an inspection. This allows us to better serve clients by more easily scheduling cost-effective inspection trips and by minimizing unexpected additional inspection costs.
- Based on requests, and to provide a cost-effective option when clients need to include new parcels in upcoming inspections, add acreage applications are now eligible for our two- or five-day Rush Review service (www.ccof.org/resource/rush-review-request). Note: Rush Review service provides fast review of the application only; inspection and certification decisions follow our normal timelines (www.ccof.org/faq/how-long-does-it-take-getresults-my-inspection). Our Expedited service (www.ccof. org/resource/expedited-certification-program) continues to be available if you have a short certification time frame.
- NEW: Operations submitting complete add acreage applications during year one or year two of the parcel's three-year transition will receive a reduced fee of \$75. Submitting new parcels early can significantly reduce your costs and give you the added assurance of CCOF Certified Transitional certification (<u>www.ccof.org/</u> <u>page/ccof-certified-transitional-program</u>) for eligible parcels.*

You still have the option of making a parcel transfer between two CCOF-certified operations, which will have a modest fee increase to \$200. As always, inspection is generally not required before approval for complete parcel transfer requests submitted within one month of the date of transfer. All current fees can be found in the CCOF Certification Services Program Manual (<u>www.ccof.org/resource/ccof-certification-</u> <u>services-program-manual</u>).

* OCal parcels are not eligible for transitional certification at this time.

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CCOF Is Now Accepting Applications From Organic Producers for PrimusGFS Food Safety Certification!

CCOF Certification Services is now offering PrimusGFS food safety certifications for organic producers! CCOF is accepting applications from farmers, coolers/distributors, harvest crews, packinghouses, and processors of produce. If you are interested in obtaining a quote for services or in applying directly, please email us at <u>foodsafety@ccof.org</u> or complete our online form: www.ccof.org/webform/apply-ccof-food-safety-services.

Do you have non-organic crops or products too? We can also certify your non-organic acreage and products, so long as some part of your operation is organic or in transition to organic.

CCOF provides food safety certification by and for organic producers. Often, we can combine your organic and Global Food Safety Initiative (GFSI) audits in the same trip. We still offer GLOLBALG.A.P. certifications, but we have added PrimusGFS to give producers more choice and a variety of solutions to fit your unique operation. Email us at <u>foodsafety@ccof.org</u> for more information.

We look forward to working with you!

chapter **UPDATE**

CCOF Chapters Are Up To the Challenge

With year-round production in California, it's often a challenge to take the time to gather together and talk organic. But CCOF chapters are up to the challenge. Even in the midst of fall harvest activities, leaders organized chapter meetings around the state, and four chapters held leadership elections.

Fresno-Tulare Chapter

Led by Chapter President Aaron McAfee of Raw Farm, the chapter held its first in-person meeting in two years at the Portuguese Hall in Fresno in September 2021.

The members acknowledged outgoing Chapter Treasurer Eldon Thiesen for his eight years of service keeping the chapter's books, and Joey Campbell was welcomed as the incoming treasurer.

Much of the conversation centered around the chapter's efforts to create an organic minor at Fresno State University. Fresno State already has supportive infrastructure in place, including a CCOF-certified greenhouse that serves as a classroom for horticulture students. Fresno State has linked the creation of the organic minor with an endowed position for a soil microbiologist and is actively raising funds to cover the cost. More information is available online at <u>www.</u> fresnostate.edu/jcast/agonefoundation/organicminor.html.

Kern Chapter

The Kern Chapter met in November at Great Change Brewing in Bakersfield. Convened by Chapter President Kim Dixon of Bolthouse Farms, attendees included representatives from Bolthouse, Tasteful Selections, Lehr Bros., Anthony Vineyards, Vignolo Farms, and Country Sweet Produce.

The meeting featured presentations from Jose Flores, outreach coordinator with the California Farmworker Foundation, which provides resources for farmers and farmworkers. Amanda Boschma and Wendy Flowers with California Women for Agriculture also sspoke about their organization's statewide activities, including agricultural scholarships and quarterly meetings.

Just before the meeting, the Kern Chapter held an online election with the following results: President–Kim Dixon, Bolthouse Farms; Vice President–Lindsey Mebane, Tasteful Selections; Secretary–Katie Verhoef, Agriculture Capital Operations; Treasurer–Pete Belluomini, Lehr Bros.; Board Representative–Malcolm Ricci, Bolthouse Farms.

Central Coast Chapter

The Central Coast Chapter convened at JSM Organics in Royal Oaks in November in the first attempt at a truly hybrid in-person and online chapter meeting. Zoom participants were able to participate fully–except for missing out on the delicious tacos that were served on-site. Chaired by President Javier Zamora, the meeting included robust discussion amongst members. CCOF Foundation Director Jessy Beckett Parr presented an update on available resources for members, including an additional \$20 million for federal organic certification cost share, and encouraged applications to the Healthy Soils Program and the State Water Efficiency and Enhancement Program.

The Central Coast Chapter also held an election with the following results: President–Javier Zamora, JSM Organics; Vice President–Steve Tabrizi, Pica Trade Inc./California Gourmet Inc.; Secretary–Jeanine Frierson, Mann Packing; Treasurer–Christine Coke, Coke Farm; Board Representative–Grant Brians, Heirloom Organic Gardens.

At-Large Chapter

In February 2018, the CCOF Board of Directors voted to create the At-Large Chapter to represent farmer members not represented by the regional chapters in California and Mexico. Nadine Lew Basile of Soter Vineyards/Mineral Springs Ranch in Oregon served as the first board representative of the At-Large Chapter from 2018 to 2021. Thank you, Nadine! An election was held in December, and Andrea Davis-Cetina, previously a board representative from the North Coast Chapter who has moved to her home state of Maryland, was elected as the new board representative.

Additional Chapter News

The Mexico Chapter also held an election at the end of the year. Esteban Macías Padilla of Comercializadora GAB SA de CV was reelected as board representative; Andrés Amezcua of Frutos Orgánicos San Rafael was elected president; and Paola A. Guerrero of Ganfer Querétaro was reelected as vice president.

The Big Valley Chapter will hold an election early in 2022. We encourage CCOF members in Contra Costa, Merced, San Joaquin, and Stanislaus counties to consider stepping up and running for leadership positions in the Big Valley Chapter.

To learn more about how to participate in your chapter, visit <u>www.ccof.org/chapters</u>.



Invest in us so that we can INVEST IN YOU

Here are 5 Reasons to invest in **Organic Trade Association membership** for your business:

- Expert guidance and advice on organic regulatory issues
- **2** Direct opportunities to advocate for organic priorities on Capitol Hill
- **5** Exclusive marketing tools to increase your visibility with customers and suppliers
- Effective crisis communications support and proactive media outreach
- **5** Access to market research and consumer insights to develop your business strategy

THE SINGLE MOST EFFECTIVE WAY you can address the range of critical issues facing your organic business is by joining the Organic Trade Association. We bring the supply chain together—from farmers to processors to distributors to retailers—to promote and protect the growing organic sector. Membership instantly connects you to a professional community of organic leaders, but connections are just the beginning! As a member, you also enjoy access to exceptional experiences, educational resources, and advocacy tools to make you and your organization thrive.



IMPACT

We create a powerful voice at the federal, state and local levels to advocate for organic



CONVENE

We convene the industry on key issues that affect organic farms and businesses

EDUCATE We provide nformation and educatio on critical issues

ACTIVATE

We act fast to correct misinformation and protect the organic sector from outside attacks

JOIN NOW

Contact the Organic Trade Association membership team for more information about how joining can help you grow your business and strengthen the organic sector.

Cassandra Christine, Director of Industry Relations, Membership, and Development (831) 234-5710 | cchristine@ota.com

OTA **UPDATE**

New Program Pursues Diversity and Entrepreneurship for Organic

In Loris, South Carolina, Kendrick Staley, a Black farmer, set out to revive his family's small farm. The farm had been lying fallow for more than 10 years when he decided to move back from the city and resume the farm's operations. From the beginning, he committed to being environmentally sustainable. He would not grow produce using pesticides or genetically modified seeds. He would use fundamental farming principles and practices to maintain healthy soil. He explained all of this to me without ever using the word "organic."

Staley had registered and numbered the farm with the state, but organic certification was still missing from the massive to-do list of the small farmer. It was not until he was introduced to the Organic Trade Association's Diversity and Entrepreneurship Program that he began to consider the possibility of becoming organic.

Many farmers who are Black, Indigenous, and People of Color (BIPOC) share a hesitation toward organic. While organic practices have long been a part of their traditional farming, the term "organic" is not. In these communities, the term appears to be laced with mistrust, and organic appears out of their reach. After taking a closer look at the organic industry, its beliefs, its goals, and its benefits, Staley could clearly see the alignment in a way that he never had before.

His is not an isolated case. There are thousands more who also had not been presented with a convincing opportunity to explore joining the organic movement. As a leader in the protection and promotion of organic, the Organic Trade Association understands the social responsibility in helping shape a more inclusive agricultural future for the good of the organic market and our communities.

Our goals are geared toward building industry, community, and individual capacity for collaborative actions that empower all people to exercise the right to healthy and sustainable food. Our efforts will continue to model the work of One Step Closer's J.E.D.I. Collaborative. These industry peers and experts are leading this work for the natural products industry, framing the business case for embedding justice, equity, diversity, and inclusion into our entire food system.

Our Diversity and Entrepreneurship Program, which extends a complimentary two-year membership to BIPOC-owned farms and businesses, is just one part of the trade association's commitment to justice, equity, diversity, and inclusion (JEDI) within the organic industry. Our JEDI statement and commitment were created from our experiences and the direct feedback of our members.

We decided to make a conscious effort to ensure that our successes in growing the organic movement not only avoid unintentionally perpetuating social inequalities but also create more diverse allies. We understand that diversifying our membership to include food justice organizations and influencers will greatly amplify our voice and our work.

Reaching these goals will be a vast and measured body of work. To ensure that we continue to stay on track, we have established a council of our members. Our Diversity Council will help guide and participate in many of our commitments. The council will have a diverse work plan, but its largest goal will consist of exploring establishing a foundation for the organic industry to further this work. The trade association also has many internal commitments geared toward creating more diversity on our board and within our staff, contractors, and speakers. There is great opportunity in this space, and we are committed to being a part of all the great changes to come.

There is great opportunity in this space, and we are committed to being a part of all the great changes to come.

New Certified Members

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Salinas, CA www.68produce.com

A&T Organic Farms Salinas, CA

Abbey Road Farms Carlton

ACMII California 6. LLC dba **Columbine Vinevards** Delano, CA www.columbinevineyards.com

ACMPC Oregon 2, LLC dba Halls Ferry Farm formerly Halls Ferry Farm Independence, OR

ACMPC Oregon 3, LLC dba Smith Farm Dundee, OR

Adam Martin dba Martin Farms Ghent NY

Agricultura Controlada S.A. de C.V.

Dolores Hidalgo, Mexico Agro Productos Raramuri S.P.R. de R.L. de C.V.

Agrocir S.A. de C.V. Hermosillo, Mexico www.agrocir.com

Agronegocios Santa Ana S.A. de C.V. Guaymas, Mexico www.agrocir.com

Agser Contracting Coachella, CA www.agsercontracting.com

Alto Corralitos Ranch Watsonville, CA

Amerifresh S. de R. L. de C.V. Mexicali, Mexico

Amycel San Juan Bautista, CA www.amycel.com

Angeles Products Santa Maria, CA

Arcoiris Organic Farm Salinas, CA

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www.aromacoffee.com Avalon Orchards LLC

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Axis Ingredients, Inc.

Ayala Fresh Organics alinas, CA

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Bagdasarian Packing Mecca, 110

Mecca, CA Barbara Farming Co. LLC Sanger, CA

Basin Farming LLC Imperial (A

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Batth Dehydrator, LLC Caruthers, CA www.batthfarms.com

BBRRBR LLC dba Petaluma **River Ranch** Petaluma, CA www.petalumariverranch.com

Ben Jue Jr. & Curtis W. Jue Sanger, CA **Benchmark Nutriceuticals LLC** Pineville, NO

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Saint Paul, MN www.blackeyebeverage.com

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Farms, Inc. Wytheville, VA www.bottomleys.com

Brian Barrett Farms Davis, CA **Brogan Farms**

Lindsay, CA **Buckhead Meat & Seafood** Mid-Atlantic

Landover, MD www.metropoultry.com

Bucktown Roots Vacaville (1 Buzzard Lagoon Organic Orchards dba Buzzard Lagoon

Organic Orchards Corralitos CA Cado Crazy Valley Center, CA

www.crazycado.com California Aloe Company, LLC

Fallbrook CA www.californiaaloecompany.com California Organic Flowers.

Inc. dba Delphi Davenport, CA www.californiaorganicflowers.com

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Lifebloom Corp.

www.lifebloomcorp.com

Loping Coyote Farms LLC dba

Mountain Mushrooms

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www.mendozavm.com

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Michael Felkins & Andy Oilar

Management LLC

Gevserville, CA

Chicago, IL

Bieber, CA

Miguel Llamas

Jocotepec, Mexic

Los Lunas, NM

MPIO, Inc.

Santa Fe. N

M's Organic

R.L. de C.V.

Bains

Yuba City, CA

Soledad CA

Oxford (T

Mazatlan, Mexico

My Organic Farm

Redwood Valley, CA

Mora Lake S.P.R. de R.L.

Mosimann Organics, LLC

www.mosimannorganics.com

Rancho Dominguez, CA

Mr. G's Organic Produce

Mucho Mango Packer S.P.R. de

Naginder S Bains / Sundeep

Natividad Organic Farm LLC

New Mexico State University

Management - Seven Stones

Newport Meat Northern

Ni'ihau Ahiu Provisions, LLC

Nicholas Boldt dba Nicholas

Oakville Hill Cellar dba Dalla

www.dallavallevinevards.com

Oak Grove Farms LLC

- Sustainable Agricultural

Science Center at Alcalde

Alcalde, NM www.alcaldesc.nmsu.edu

New Pina Vineyard

Vineyard

Saint Helena (A

California. Inc.

www.sysco.com

Kaumakani HI

Roldt Farms

Reedley, CA

Fallbrook, CA

Napa, CA

Valle Vineyards

Fremont, CA

Natural Sourcing, LLC

www.naturalsourcing.com

www.e-mpio.com

Meadwerks LLC dba High Seas

www.marblemountainfarm.com

Marchy Dorsett Hulling and

www.maiesticspice.com

Los Angeles, CA

Happy Camp, CA

Shelling, LLC

Firebaugh, CA

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Meaderv

Goleta, CA

North Plains Of

Fiore Di Pasta, Inc. Fresno, CA www.fioredipasta.com

Fox Nutritional Labs Caddo Mills, TX www.foxnutritional-labs.com

Fresh Gourmet Cuisine Northridge, CA

Freshies of New Mexico, LLC Velarde, NM www.freshiesnm.com

Frutos Frescos de la Mañana S.P.R. de R.L. de C.V. Purepero, Mexico

G & J's Little Farm, LLC Mariposa, CA www.gandjslittlefarm.com

Garcal Organic Farms Salinas, C

Gerken's Organics, LLC dba Gerken's Organics Montrose, CO

www.gerkensorganics.com **Giesbrecht Hulling** Glenn, CA

Glam Air, Inc. dba Mayan's Secret Canoga Park, CA

www.mavanssecret.com **GMIC Vineyard LLC dba Hanzell** Farm & Vinevards Sonoma, CA

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Goodhue Farm, LLC Las Cruces, NM

Green Tractor Farm

www.greentractorfarm.com

Greenleaf Nurserv. LLC

dba Groundwork Coffee

www.groundworkcoffee.com

Santa Clara S.P.R. de R.L.

H. C. Schmieding Produce

Produce; Canon Potato

www.schmieding.com

Company LLC dba Schmieding

Harold J. Trujillo dba Trujillo

Hass Heights Growers, Inc.

Henry's House Of Coffee. Inc.

dba Henry's House Of Coffee

www.henryshouseofcoffee.com

www.highgradeorganiccbd.com

Hopville Farms LLC dba

Hopville Columbia Farm

Napa, CA www.hossfeldvineyards.com

Hybrid Confections, LLC

www.hybridconfections.com

www.icesorganicfarm.com

Hossfeld Vineyards

Grand Junction, CO

Alcalde, NM

Ice's Organic Farm

Groundwork Coffee PNW, LLC

Grupo Agricola De Produccion

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Bonsall (A

Portland, OR

Tonila Mexico

Center, CO

Farm

Ledoux, NM

Fallbrook CA

San Francisco (A

Velarde, NM

Clatskanie, OR

High Grade Hemp

Rancho Primo Acampo, CA **Ranchos Acequias**

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www.rawrootsfarm.com **Red Mountain Farm**

Abiquiu NM **Red Pantz LLC**

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Romero Farms LLC Dixon, NM

Royal Farms/Sundale Vinevards Tulare, CA

www.sundalevineyards.com **RTS Agri Business, LLC**

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Ryan Johnson Specialty Farms, LLC Hammett, ID

Sageberry Farms LLC Huron (A Saintsbury LLC

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Salvestrin Winery dba Salvestrin Wine Co. LLC Saint Helena, CA www.salvestrinwinery.com

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Colusa, CA www.sandersseed.com

Sandpoint Wines LLC dba Young Inglewood Vinevards Saint Helena, CA

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Santa Ana Pueblo, NM www.cookingpost.com Santa Rosa Junior College Shone Farm dba Shone

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SB Voelz Farming Woodland, CA

Schafer Ranch Inc. Madera, CA **Scheid Family Wines**

Bradley, CA www.scheidfamilywines.com

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Setton Organic LLC Ducor, CA

> Seven Chef's Garden, LLC dba Sonoma Hills Farm Petaluma, CA www.sonomahillsfarm.com

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Shannon Ridge Vineyards Inc.

Clearlake Oaks, CA www.shannonridge.com Shawn Ciapusci dba Pickled Pelican Farms

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Farms Linden, CA www.smitfarms.com

SMP Organic Farms

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Stiles Family Farmstead Lansing, NY Stony Hill Vineyard dba

Stony Hill Saint Helena, CA Success Valley Farms, LLC dba Success Valley

Produce, LLC Oxnard (A www.successvalleyproduce.com

Sundance Natural Foods Valley Center, CA www.sundanceorganics.com

Sungreen Living Foods LLC Santa Fe. NM

Sunnywell Farm Lucerne Valley, CA Sweet Life, LLC dba Sweet Life by Sucro, LLC / Sweet

Life Lackawana, NY www.sucro.us

Sweet Valley Farms Lompoc, CA

Synergia Ranch LLC dba Synergia Ranch Organic anta Fe, NM www.synergiaranch.com/ organic-farm

The Morning Star Company dba Lucero Farms, LLC

Firebaugh, CA www.morningstarco.com Thornhill Farms, LLC

Poplarville, MS www.thornhillblueberryfarm. com

Tikal Organic Farms Salinas, CA

Tomis Holdings, Inc. dba Árvore De Luz Temecula, CA

www.arvoredeluz.com **Tookey Farms** Healdsburg, CA

Tos Farms, Inc. Hanford, CA

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DGT Tara

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LLC

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Zellah Hospitality Properties, LLC dba Yorkville Vineyards



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