CULTIVATOR

Summer 2023 | *News from The Cornucopia Institute* | cornucopia.org

How the Pesticide Industry Controls What You Eat

by Stacy Malkan with Kendra Klein, PhD and Anna Lappé

Merchants of Poison: How Monsanto Sold the World on a Toxic Pesticide reveals how pesticide companies have waged expensive campaigns to shape the narrative about science and our food system, pushing the ideas that pesticides — a term that encompasses insecticides, herbicides, fungicides, and more — are safe and that we need them to feed the world. The following is an excerpt:

Groundbreaking global studies have shown the grave threat agricultural chemicals pose to biodiversity and public health and how they fail to deliver on their promises for greater agricultural productivity. Yet despite the mounting evidence, the pesticide industry has doubled down on deceptive messaging. Using Monsanto as a case study, this report reveals five tactics:

1. Corrupt the science

The authors show how Monsanto employees have shaped the science on glyphosate, including paying academics, ghostwriting papers, influencing regulatory agencies, and using other tactics to shape the scientific and regulatory record.

2. Co-opt academia

The authors report how Monsanto and other pesticide companies partnered with and paid universities and professors who in turn promoted and defended glyphosate and the GMO seeds designed to tolerate the herbicide. Many of these partnerships were not transparent to the public.

3. Mobilize third-party allies

The authors describe the large and well-funded third-party echo chamber — the front groups, professional organizations, universities, astroturf campaigns, and others — who disseminated messaging crafted by Monsanto and its PR firms for the purpose of opposing health, safety, and transparency regulations for pesticide industry products.

4. Track and attack scientists, journalists, and influencers

The authors examine how industry front groups that claim to be "pro-science" — including the Genetic Literacy Project and American Council on Science and Health — targeted the World Health Organization's cancer researchers, and other scientists and journalists who reported on glyphosate's links to cancer.

5. Dominate online spaces

The authors discuss how Monsanto and other companies deployed the same front groups that attacked scientists and journalists in defense of glyphosate to infiltrate online spaces and garner top placement in Google News searches to elevate industry messaging.

The story of deceit this report documents is a story about the pesticide industry's vulnerability: To evade the regulation and transparency that would impact their profitability and market share, the pesticide industry — just like the oil and tobacco industries — is profoundly reliant on the success of PR subterfuge to maintain profitability. Understanding how this subterfuge works is paramount to informing the public about the health and environmental risks posed by the increasing use of pesticides and the availability of safer alternatives.

Read the full report at cornucopia.org

Building Bridges to Uncover the Risk of Pesticides

A word from Cornucopia ED Melody Morrell on our conversation with Dr. Charles Benbrook

When my mother was born in 1939, my family grew or traded for the food they ate. As a kid, mom picked raspberries for her elderly neighbor, rode on the tractor with her grandmother, and helped her father milk the cow.

As an adult, mom prided herself on getting the best food deals. She would crow about 29 cents per pound for chicken. While she wasn't fooled by the *fresh from the farm* marketing on her grocery store purchases, she relied on cheap prices and the periodic quick meal.

In 2015, she had the first of seven bowel surgeries. Unbelievably, she recovered from the initial sepsis and all the invasive procedures that kept her alive. I brought her home and nursed her back to sitting up, and then walking, with organic food and herbs. She lived six more years in deep gratitude.

The nutrients in our food matter — and so do the pesticides. We are exposed to a cocktail of pesticides in a single meal of non-organic food and beverages.

The Cornucopia Institute recently sat down with Dr. Charles Benbrook to discuss pesticides. He has spent 50 years researching their impacts on our health and the environment and advocating for change. He worked on the House Committee on Agriculture and for the National Academy of Sciences and played an important role in the Food Quality Protection Act of 1996, which aimed to change the way EPA regulates pesticides to better protect children's health.

Benbrook's work has culminated in a sophisticated system for quantifying the risk of pesticide residues in our diet. Called the Dietary Risk Index (DRI), it could significantly advance how regulators measure and comprehend the human-health implications of pesticide use — "like going from a rotary phone to an iPhone 15 in one step," he says.

Fueled by a dataset comprising 125,000 food samples, the DRI is a much-needed tool for undermining the tactics used by the chemical industry and highlighted in our cover story. It helps inform Cornucopia's strategy, and adds to the information that shapes our investigations, so we can continue to protect the marketplace for authentic organic farms — and protect our loved ones who rely on organic food for the nourishment they need. I am honored to share this excerpt of our interview with Benbrook here. (Read the complete Q&A on our website.)

How does the DRI compare to other systems used to assess pesticide dietary risk?

There is no other system like it. It shows the ratio of pesticide exposure in one serving of food relative to the maximum acceptable daily dose determined by the EPA, a threshold that considers the impact of lifetime exposure. Users can aggregate risk levels of multiples residues in a particular food and slice and dice data to show pesticide dietary risk in imports versus domestic and organic versus conventional food.

Isn't the EPA already tracking this?

No, it is not. The EPA's job is to set hopefully "safe" tolerance levels covering residues of a single pesticide in all the foods on which a pesticide is applied.

But the EPA, and regulators worldwide, lack a system to comprehensively appraise dietary risk levels and trends across foods, pesticides, productions systems, and countries of origin. They surely need such a system.

What does the DRI data say about how conventional and organic produce differ in potential chemical exposure?

There's a huge difference. There are a few hot spots of pesticide risk in imported organic – for example, frozen cherries from Turkey and some of the spices and food ingredients coming from Southeast Asia. But it's safe to say that overall, both domestically grown and imported organic food eliminates most of the pesticide risk in the US food system, especially in fresh fruits and vegetables.

The science is clear. So why isn't this widely accepted by the general public?

Unlike many European consumers, the US public does not understand the enormous human health and environmental benefits stemming from organic food and farming. Why? Because USDA policy still asserts that organic food is neither safer nor more nutritious. The other enormous institutional constraint arises from the fact that researchers can't get public funding nor publish findings about the human health benefits of organic food without triggering the immune system of "US Ag Inc." I've seen it happen many times. The agribusiness and food companies that are profiting from our current high-volume, low-quality industrial food system have captured the keys to the city, and they're not going to hand them over without a fight.

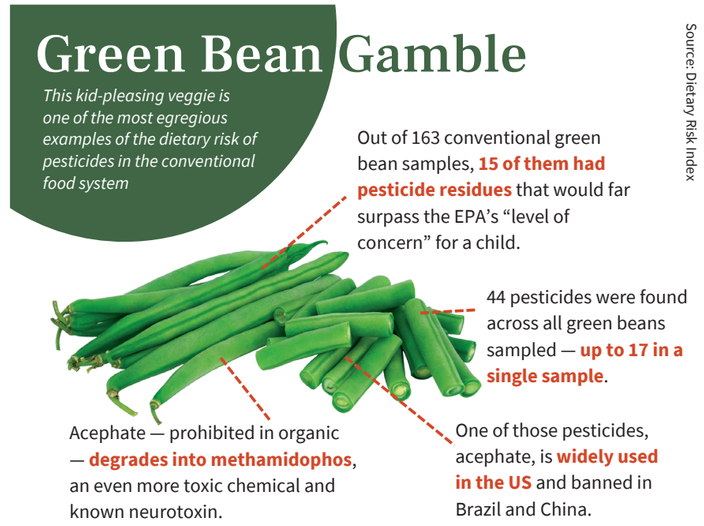
Which groups are the most vulnerable to the pesticide risks in our food supply?

The most serious risks come during the two bookends of life: infancy and childhood and older adulthood. The science pointing to pesticide-exposure impacts on children's neurodevelopment is regrettably solid now, and new evidence of adverse impacts on metabolic health among children is deeply worrisome.

There are many reasons why organic food enhances the health of aging Americans. Our bodies' ability to produce indigenous antioxidants weakens as we age and as our immune systems get rusty. Both unavoidable consequences of aging underscore the importance of nutrient-dense food. A lot of food isn't palatable to older people, who struggle to get enough nutrients from the few foods they consume regularly. But you can make a healthy, delicious diet out of fresh organic berries, broccoli, beans, spinach, and dairy products. Antioxidants delivered through organic food fight inflammation, which is linked to most of the mental diseases of aging. And if you're combating cancer, organic food cuts exposures to chemicals that trigger or promote tumor growth.

What is your plea to policymakers for acting on this information?

There's an important window of opportunity in the current Farm Bill cycle. I hope Congress will convince the National Organic Program (NOP) to adopt a new application of the DRI we call OrgTracker, which has received encouraging interest among certifiers. OrgTracker would take the pesticide residue data that the NOP requires certifiers to collect and run it through the DRI. If the NOP developed new, rapid-response enforcement capabilities and deployed OrgTracker to target growers shipping organic food with questionable and/or illegal residues, the organic community could quickly eliminate 90% of the already very low pesticide dietary risk from certified organic food. *That* is how the NOP and organic community can retain consumer confidence in the integrity of the USDA organic seal.



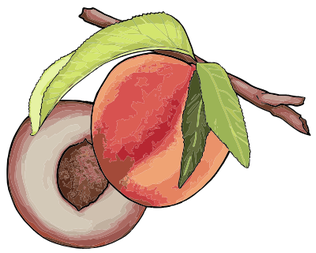
Ark of Taste: Delicious and Distinctive Foods Facing Extinction

A varied diet is a vote for biodiversity. This season, support authentic organic farms growing uncommon produce bred for flavor and nutrition, not for long stays on a climate-controlled truck. These growers play an important role in keeping our plates packed with vibrant fruit and vegetables. Seek out their unusual varietals, and help keep them in production, by referring to Slow Food USA's Ark of Taste, a living catalog of delicious and distinctive foods facing extinction. “Agricultural biodiversity and small–scale, family-based food production systems are in danger throughout the world due to industrialization, genetic erosion, changing consumption patterns, climate change, the abandonment of rural areas, migration, and conflict,” says Slow Food Director of Programs Mara Welton. “The Ark of Taste invites everybody to take action.” We teamed up with Slow Food USA to illustrate the following fruits and vegetables from the Ark of Taste.

Fish Pepper

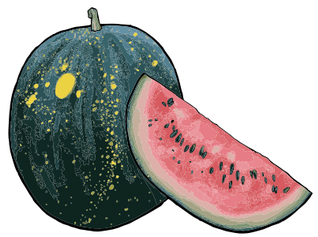
An African-American heirloom plant that predates the 1870s, this spicy pepper was traditionally paired with oysters and crabs from the Chesapeake Bay. As it ripens, the fruit changes in appearance, developing streaks before turning red.

Belle of Georgia Peach



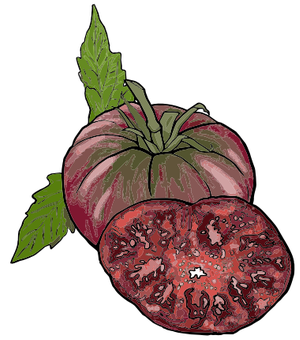
Debuted in 1870, this prolific fruit was the most popular peach in the US at the end of the 19th century. Commercial growers moved on to other varieties (the White Lady is a genetic descendant), making this peach with the legendary flavor a four-leaf clover find at produce stands.

Moon and Stars Watermelon



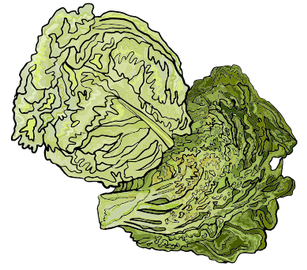
This pink-fleshed melon with a distinctive, speckled skin almost faded into obscurity in the 1970s. Thanks to a feature in Mother Earth News, this watermelon is now one of the most popular heirlooms offered by the Seed Savers Exchange.

Cherokee Purple Tomato



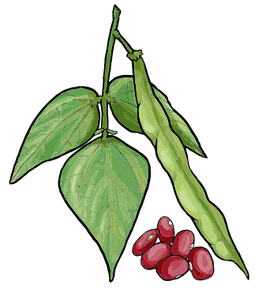
Before the tomato was standardized for the grocery store, tomatoes like this lumpy, 19th century variety flourished. Endangered and scarce for many years, this sweet and smoky beauty returned to the public eye with the modern revival of heirloom tomatoes.

Tennis Ball Lettuce



Brought to North America in 1768, this lettuce's notable shape inspired its playful name. Other lettuce varieties eventually took over the market, but this colonial-era green is still a hardy choice for modern gardens and community-scale organic farms.

Hidatsa Red Bean



Grown by the Hidatsa tribe of the Missouri River Valley in North Dakota, these heirloom beans were traditionally harvested after the pods were allowed to dry on the plant. The flavor of the beans has been compared to kidney beans.

Illustrations by Kestrel Burcham

Read the stories behind more rare foods in *The Ark of Taste* book, coming this summer, and featuring grower profiles and recipes from Slow Food chefs. Visit *slowfoodusa.org/ark-of-taste* for more information.

Organic Awakening

A family's experience with pesticide exposure leads to an organic farming legacy

Anne Ross, JD

Standing in the shade of a lone California pepper tree, Michael Clark takes a rare moment to reflect on his family's 130-acre organic vegetable and berry farm.

A fourth-generation farmer at J.R. Organics in Escondido, California, Clark recalls how his late grandfather, Joe Rodriguez Sr., cultivated his first crop in the days when chemical companies "told farmers what they wanted to hear, with promises of doubling and tripling yields."

A livelihood reliant on toxic chemicals felt like an oxymoron to Joe Jr. After suffering the effects of pesticide exposure, which included a visit to the emergency room, Joe Jr. urged his father to try organic.

"It took some convincing," Clark admits. They agreed to a 5-acre trial, which expanded to 20. After the crops thrived, Joe Sr. converted the entire farm.

Certified organic since 1986, J.R. Organics grows more than 100 organic vegetable varieties, as well as strawberries and blackberries. The extended family pitches in on weekends, selling at 17 regional farmers markets. Produce is also distributed through retailers like Jimbo's (see page 7) and to several hundred CSA members.

The Southern California climate accommodates nearly year-round production. Amid the farm's rolling terrain, a strawberry patch flourishes where lettuce was harvested just a few years before. The strawberry plants will stay in the ground for several years before a different crop takes its place. The nutrients left behind from each crop will enrich the soil and discourage insects.

As crops are rotated, weeds that support soil microbial communities are allowed to flourish. Tractor attachments are then used to bury these beneficial plants and cultivate the ground.

Clark credits the soil, along with a homemade compost concoction (created by Joe Jr. and nicknamed "Black Gold"), for the farm's exceptionally flavorful products.

Like all organic farmers, they are constantly competing with conventional operations that use harmful chemicals to produce cheaper food. Clark is keenly aware of the investment that organic farmers make to produce a better, safer product. "It's not a gimmick. It's the cleanest food you can buy."

He recalls the recession in the 2000s, when he was just out of high school. The farm's production was dwindling, but Clark persevered, seeing the potential in local farmers markets and convincing the family to focus on building a loyal customer base.

The result is one of Southern California's most celebrated organic produce farms, a testament to planning, grit, and knowledge. "Organic farming is the future," Clark says. "Many of us have awakened to the fact that we don't need to use toxic chemicals to produce the best food. We just have to keep our eyes open and our hearts big — taking care of each other and the land."

Photo courtesy of J.R. Organics

The secret behind J.R. Organics' flavor-packed strawberries is the soil. Find certified organic, soil-grown berries using the list provided with this issue.

You Took Us into the Stores!

We're shouting from the rooftops: Cornucopia's tools give consumers concrete ways to impact the food system!

Thanks to your continued support, we're collaborating with the top of the food chain to bring these tools into the grocery aisles of independent retailers and co-ops (education is one of the seven co-op principles) throughout the country.

Interest has surpassed our wildest expectations. In fact, Natural Grocers just requested 16,000 copies of our printed Organic Egg Scorecard (100 for each of their 160+ stores)! We are a powerful team.

It's just one of many examples of how consumers, retailers, and organic advocates can work together to improve transparency and integrity in the food system. Says Natural Grocers Executive Vice President Heather Isely: "It's our hope that Cornucopia's consumer tools will inspire other brands to improve their standards and continue to raise the bar within our food and agricultural industries."

Let us know if you'd like to bring Cornucopia into your favorite co-op or independent retailer!

Photo courtesy of Jimbo's

Integrity in the Aisles

With four locations in San Diego County, Jimbo's is an organic shopper's utopia.

Its produce section is 100% USDA certified organic. Its aisles feature some of the highest quality organic food in the marketplace, including many of the top-rated brands on Cornucopia's Organic Scorecards. And a commitment to local businesses and farms like J.R. Organics (see opposite page), underscored by a "Support San Diego" label, makes it easy to shop local.

Their non-negotiable product standards assure shoppers that preference will be given to "those products that contain organic ingredients." In fact, Jimbo's has wielded its influence to persuade manufacturers to remove suspect ingredients from their foods and has encouraged many producers to pursue organic certification.

The resources Jimbo's provides are as important as its exceptional inventory. Its new S.O.I.L. Program alerts consumers to brands practicing regenerative organic agriculture (the brands must be certified organic for their application to be approved). And, under another relatively new program, in-store signage highlights "hydroponically grown" produce, enabling consumers to make informed purchasing decisions.

If you happen to spot a *Cultivator* in a Jimbo's store, thank them for sharing our work and upholding transparency and integrity in the food system.

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We are pleased to continue to bring you quarterly issues of the newsletter as a benefit of your support.

What's Inside

- Through our partnership with Slow Food USA, we're sharing stories of lesser-known fruit and vegetable varieties. Have you ever heard of Moon and Stars Watermelon?
- We interviewed Dr. Charles Benbrook about the risk of pesticide residues in our diet. His answers might surprise you.
- J.R. Organics shares the journey of their organic family farm — and how they rely on the soil and each other.
- To help you find soil-grown, certified organic berries in your state, we created a berry list based on our online map.

Photo courtesy of J.R. Organics