

What Organic Doesn't Say

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Abstract

A careful choice

Before any of this reached a courtroom, it began the way most of these stories begin: with a parent in a grocery aisle, trying to do right by a child.

Sarah and Grant Palmquist fed their son Earth's Best organic baby food [1]. It is worth pausing on that choice before the litigation swallows it, because it was a good choice, made in good faith, by exactly the kind of careful parents a food system ought to be able to reward. They did the things we tell parents to do. They read the label. They looked for the seal. They paid more for the version of the product that promised more. For a certain kind of conscientious parent, buying organic baby food is almost the definition of trying — the small daily tax you pay to believe that someone, somewhere up the supply chain, has been careful on your behalf.

What the Palmquists could not have known — because nothing on the jar told them, and nothing in the certification behind it was designed to — is that the organic seal they trusted was answering a different question from the one they were asking. They were asking, in effect: is this clean? The seal was answering: this was grown a particular way. Those are not the same question. Most of the time the distance between them does not matter. This briefing is about the times it does.

What the seal certifies

To see the gap clearly, begin with what the organic seal actually certifies, which is both more specific and more honorable than the shorthand it has become.

The USDA organic standard, built on the Organic Foods Production Act of 1990, certifies a method of agriculture [2]. An organic crop is grown without synthetic pesticides or synthetic fertilizers, without genetically engineered seed, without sewage sludge, without irradiation. These are real commitments with real consequences — for soil biology, for farmworkers, for watersheds, and for the synthetic-residue load a child ingests. A parent who buys organic to keep organophosphate pesticide residues off her child's food is getting precisely what she paid for. The science on that point is not in doubt, and organic delivers it.

What the standard does not do — because it was never written to — is set a limit on heavy metals, or require that anyone test for them. There is no number for lead in the organic rule. There is no threshold for cadmium, no assay for arsenic, no point in organic certification at which a finished jar of purée is measured for the metals this briefing is about. Organic governs what is added to a crop and how it is grown. It is, by design, silent on what was already in the ground.

Follow it back to the soil

That silence is not an oversight. It is a fact about where heavy metals come from, and the way to understand it is to do what reporters who cover food have always done: follow the thing back to its

source.

Trace the lead, or the cadmium, or the arsenic in a baby food backward from the high chair, and the trail does not stop at the factory, or at the farmer's choice of spray, or at any decision an organic certificate governs. It runs further back than that — into the soil itself, into the water that moved through it, and in some places into the air that settled on it across a century. Heavy metals are mostly not something added to food. They are something taken up by it. A plant is a kind of straw: it pulls water and minerals out of the ground it stands in, and if that ground carries cadmium or lead or arsenic — from volcanic geology, from a century-old orchard's lead-arsenate residue, from irrigation water, from the slow fallout of industry — the plant pulls those up too, indifferent to whether the farm around it is organic or conventional.

The pattern appears wherever the question is asked carefully. Rice takes up arsenic with unusual efficiency, because it is grown in flooded paddies whose waterlogged chemistry releases the arsenic already present in soil and irrigation water and makes it available to the plant; the FDA set an action level for inorganic arsenic in infant rice cereal precisely because the contamination tracks the agronomy of rice itself, not the label on the bag [5]. Cocoa carries cadmium out of the soils of Latin America: an FDA survey of the U.S. cocoa and chocolate market found cadmium rising with cocoa content and varying sharply by origin, with Latin American cocoa running higher than West African — a geography of soil, not of certification [4]. And when researchers in New Zealand ran the clean comparison, measuring organic and non-organic vegetables side by side, they found what the soil-uptake story predicts: organic growing was associated with meaningfully lower cadmium and lower nickel — a genuine benefit, almost certainly because organic forgoes the cadmium-bearing synthetic phosphate fertilizers that conventional farming relies on — but it made no difference to lead or arsenic, and organic certification, here as everywhere, guaranteed no particular number; several samples still exceeded international limits [3]. The broader literature points the same way: organic crops can run lower in cadmium [8], and no lower in the metals that come from the ground rather than the fertilizer bag.

Read together, the shape of it is plain. Organic farming is not irrelevant to heavy metals. It is partially, specifically, and incidentally relevant — it helps with the metals that ride in on inputs, and not with the metals that were waiting in the soil. What it never does is measure the result. The certificate makes no promise about the number, because arriving at the number was never its job.

The gap between expectation and certification

Here is the gap, stated plainly, and it belongs to the structure of the system rather than to any failure of organic.

A parent reads "organic" and hears "clean." She extends the seal, reasonably, from the question it answers to the question she is asking — from how the food was grown to what is in it, including the metals she has been reading about in the news. The certification never made that second promise. But it never disclaimed it either, and in the space between what the label says and what the shopper hears, a reasonable inference quietly hardens into a belief the certificate cannot support. That is not deception. No one designed it. It is what happens when a concern the public did not have in 1990 arrives inside a food-governance system built to answer the concerns of 1990.

This is a familiar pattern to anyone who studies how food gets regulated. Certification schemes are artifacts of their moment. They encode the questions a generation knew to ask. Organic encoded a hard-won set of questions about synthetic chemistry and industrial agriculture, and it answered them well enough to become one of the most trusted words in the grocery store. Heavy metals were not on that list — not because the metals were not there, but because the public conversation had not yet found them. It

has now. And the seal that answered the old questions is, understandably, mute on the new one.

Filling a gap organic was never built to fill

The response to a gap like this is not to tear down the instrument that does its job. It is to add the instrument that does the new one. The relationship between organic and a heavy-metals certification is not rivalry. It is layering — the way a food-safety system has always grown, one focused instrument at a time, as the questions multiply.

That is the role the Heavy Metal Tested & Certified program was built to play. It does the one thing the organic seal does not: it measures. It tests a finished product against published limits for the metals organic is silent on, by independent laboratories, on a schedule, and it certifies the result [7]. It does not certify how the food was grown; organic already does that, and often better than a heavy-metals program ever could. It certifies what the growing left behind. A jar carrying both marks would be telling a parent two true things that, today, no single label tells her: here is how your child's food was made, and here is what we found when we measured it for metals.

A word of restraint belongs here, in the register a careful reader will expect. A heavy-metals certification is not a safety guarantee, and the credible ones say so plainly; this one is forbidden from claiming that a product is "safe" or "free" of anything, because the metals are in the soil and the water and therefore, at some level, in the food [6], and a label that promised their absence would only repeat the overreach this briefing is trying to correct [7]. What a heavy-metals certificate can honestly say is narrower and more useful: that someone measured, against a published number, and is still measuring. Added to organic, it closes the specific gap organic was never built to close. It does not replace the seal. It finishes the sentence the seal was never asked to finish.

Certifications evolve as concerns evolve

There is a policy lesson in all of this, and it is larger than any one program.

Food-governance systems are not built once. They accrete. Each layer answers the question its era learned to ask, and the layers that endure are the ones honest enough to mark what they do not cover, so that the next layer can be set cleanly on top. The danger is never that an older certification fails to answer a newer question; that is inevitable, and faintly unfair to ask of it. The danger is that the gap goes unnamed — that a seal keeps meaning, in the public's mind, something larger than it ever promised, until an event no one wanted forces the correction in the harshest available venue. That is what happened, this winter, to a family that trusted the label and to a brand that wore it.

Consumer trust is the real asset in this story, and it is more fragile than any seal. It survives on a single condition: that the labels mean what people believe they mean. When a gap opens between belief and certification, trust does not fail loudly at first. It erodes quietly, and then all at once. The work of keeping it is the unglamorous work of naming the gaps as they appear and filling them as they are named — not organic versus the next thing, but organic and the next thing, the system growing a new layer to meet a concern its founders could not have seen. The parents reading labels in the aisle this afternoon are extending the same good faith the Palmquists did. The least a food system owes them is to make sure the labels have caught up to the question they are actually asking.

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certification address different questions and are complementary, not substitutable.

References

[1] Hain Celestial Group, Inc. v. Palmquist. 607 U.S. ____ (No. 24-724), decided Feb. 24, 2026. The plaintiffs fed their son Earth's Best organic baby food (manufactured by the Hain Celestial Group) and alleged neurodevelopmental injury; causation is contested and is not the subject of this briefing.

[2] National Organic Program; Organic Foods Production Act of 1990. U.S. Department of Agriculture. 7 U.S.C. § 6501 et seq. and 7 C.F.R. Part 205. Organic certification governs production methods and permitted inputs (prohibiting synthetic pesticides and fertilizers, genetically engineered seed, sewage sludge, and irradiation); it does not establish maximum levels for, or require testing of, heavy metals in finished products.

[3] Assessment of Heavy Metals in Organic and Non-Organic Vegetables Post Severe Tropical Cyclone Gabrielle: A cross-sectional comparative analysis. C. Dearing, Z. Ye, and G. Robertshaw. F1000Research, 2025. doi: 10.12688/f1000research.175538.1 (153 composite samples, Hawke's Bay, NZ; cadmium and nickel significantly lower in organic vegetables; no organic effect on lead or arsenic; samples exceeded Codex limits in several cases).

[4] Cadmium and Lead in Cocoa Powder and Chocolate Products in the U.S. Market. E. Abt, J. Fong Sam, P. Gray, and L. Posnick Robin. Food Additives & Contaminants: Part B (U.S. FDA, Center for Food Safety and Applied Nutrition), 2018. doi: 10.1080/19393210.2017.1420700 (cadmium correlated with percent cocoa and varied by geographic origin; Latin American cocoa higher in cadmium than West African).

[5] Arsenic in Rice and Rice Products Risk Assessment. U.S. Food and Drug Administration. Includes the action level for inorganic arsenic in infant rice cereal (100 ppb). Arsenic uptake in rice reflects the flooded-paddy agronomy and the arsenic content of soil and irrigation water, independent of organic versus conventional production.

[6] Total Diet Study, FY2018–2020. U.S. Food and Drug Administration. Lead detected in 15% of samples, arsenic 43%, cadmium 33%, mercury 10% — heavy metals are endemic to the food supply because they originate in soil, water, and atmospheric deposition.

[7] HMTc Infant and Child Foods Program Manual. K. Pendergrass. 2026 Edition, the Institute of Contaminant Standards (ICS). doi: 10.5281/zenodo.20270512. Heavy-metal-specific scope and complementarity with USDA Organic and the Non-GMO Project (which do not address heavy metals): Part 5.5. Independent lot surveillance against published limits: Part 4. Mark-usage rules and the prohibition on safety-implying or "free-of" claims ("does not certify safety"): Part 2.5 and Part 2.1.

[8] Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses. M. Bara G6¶'Â Bâ Zrednicka-Tober, et al. British Journal of Nutrition, 2014;112(5):794–811. doi: 10.1017/S0007114514001366 (organic crops associated with lower cadmium, attributed largely to the avoidance of cadmium-bearing synthetic phosphate fertilizers).

Bibliographic record

Cite this briefing

