

The Paradox of “Natural”

by, Peter Awram, Canadian Beekeepers Federation, Director

How the world’s GMO-soy superpower became its organic-honey king and what that means for the jar undercutting you at the supermarket.

Walk into any Canadian supermarket, in fact almost any supermarket in the developed world, and find the organic honey. Odds are it reads “Product of Brazil” and odds are it came into Canada cheaper than you can produce honey for in Alberta. Now, consider, Brazil is the world’s second-largest grower of genetically modified crops: roughly 99% of its soybeans and 95% of its maize are GM. Industry sources also estimate that Brazil supplies around 90% of the world’s organic honey. The same country. How can both be true at once — and how much faith should any of us put in the mark on that jar?

A label with no rulebook

Start with what “organic” even means for honey, because the answer is stranger than most people assume. In the United States, the National Organic Program (NOP) has **never written an apiculture standard**. The USDA certifies bees under the general livestock rules, the ones written for cattle and poultry, and the Organic Trade Association admits this produces “a great deal of variability” between certifiers. Of the 100-plus operations certified organic to the US standard, only five are actually in the United States, only in Hawaii. The rest is imported. In other words, the seal on most “USDA Organic” honey certifies compliance with a bee-specific rule that does not actually exist at the USDA government level.

Where the honey really comes from

There is legitimate organic honey from Brazil, but it is not the Amazon image often implied by marketing. Much of Brazil’s export-oriented organic honey is associated with the semi-arid Northeast/Caatinga, especially Piauí, Ceará, Bahia and Maranhão. There, smallholders run hives in native flora — aroeira, angico, marmeleiro — miles from intensive farming, with Africanized bees so hardy they need no antibiotics or miticides or so the marketing says. The country has around two million hives across roughly 102,000 mostly tiny operations (under 50 hives), aggregated for export by cooperatives such as COMAPI, which gathers about 1,000 families and 40,000 hives around Simplicio Mendes in Piauí.

...and where the soy is

Here is the problem. The map below shows Brazil’s GM-crop regions against its organic-honey heartland. Historically the soy

was somewhere else: the **Centre-West** (Mato Grosso alone grows 27% of the national crop, plus Goiás and Mato Grosso do Sul) and the **South** (Paraná, Rio Grande do Sul). But the third wave of soy expansion drove straight into the Northeast — the **MATOPIBA** frontier (Maranhão, Tocantins, Piauí, Bahia), which has expanded rapidly but represents a low-teens share of Brazil’s soybean area. Two of those states, Piauí and Bahia, are also major organic-honey states. The overlap is real at the state and regional scale, but the exposure question is apiary-specific rather than proof that every Caatinga hive sits beside soy.

Brazil is one of the world’s largest pesticide markets, and has been reported as the leading market for highly hazardous pesticides; mass bee die-offs have been recorded; in Tocantins, a MATOPIBA state, honey output fell almost 50% in under a decade, blamed on deforestation and pesticides. The clean buffer that underpins the organic claim is real in places, shrinking in others, and entirely apiary-specific.

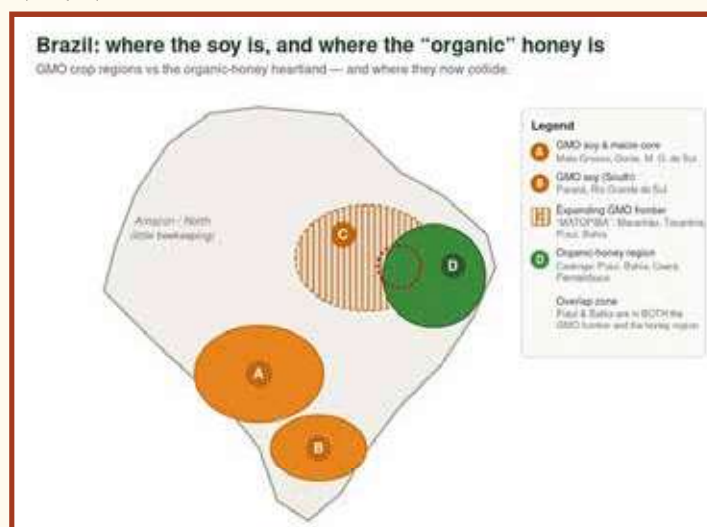


Figure 1. Brazil’s GM-crop regions (A, B and the advancing MATOPIBA frontier, C) against the organic-honey heartland of the Caatinga (D). The star marks the state-level overlap — Piauí and Bahia sit in both.

Why Brazil — and not the others?

Here is another question worth considering. Brazil is not the only country with vast, lightly farmed land. It shares the Amazon basin with Peru, Bolivia, Colombia, Ecuador, Venezuela and the Guianas — countries with enormous wild forage and far less GM agriculture. Argentina is a honey giant in its own right. Yet industry sources put Brazil at around 90% of the world’s organic honey. Why Brazil, and not any of the neighbours who, on paper, have cleaner and wilder land to offer?

The marketing answer is pristine nature, biodiversity and tough Africanized bees. Some of that is true. But it does not explain why the genuinely more remote Amazon countries barely register in the organic trade. The honest answer is less romantic, and more revealing: Brazil built the machinery. IBD Certifications is described





Clearly displaying the USDA organic symbol this sells for \$9.99 in Real Canadian Superstore



Despite being completely imported honey this has a symbol saying "Canada Organic"



by Brazilian organic exporters as the largest certifier in Latin America and the only Brazilian certifier accredited across USDA (NOP, EU, IFOAM, Demeter and SISORG and bundles thousands of smallholders into certifiable groups.

Think about this situation. If what defines "organic honey" is certification and logistics rather than pristine forage, then the supply is governed by paperwork and infrastructure. Not by how clean the land actually is. The neighbours with wilder land lack the pipeline. Brazil has the pipeline, one that is also filled with GMO corn and soy and is a giant in conventional growing.

Honey is one of the most adulterated products in the world. The EU's 2021–22 "From the Hives" investigation flagged 46% of imported honey as suspect and documented outright origin fraud "masking the true geographical origin." None of this proves any given Brazilian drum is mislabelled, but it does mean that extra scrutiny is required when looking at honey claims. It does mean the answer to "why Brazil?" has more to do with the certifying-and-shipping apparatus than with the wilderness on the label.

How it's checked — and how it isn't

Follow the jar to your shelf and the verification thins at every step. In Brazil, a private certifier inspects the apiary. Since March 2024 the US requires an electronic NOP import certificate for every organic shipment — better traceability, but still paperwork; no one routinely tests the honey itself. Canada has no organic equivalence with Brazil at all; the honey rides in on the US–Canada arrangement, which accepts US-certified product "regardless of country of origin," and the CFIA validates the certificate after the shipment lands — the importer, not the regulator, certifies the integrity of the product that goes through multiple different bodies. The EU's system is stricter, but its 2021–22 "From the Hives" action did sample honey at EU borders and that targeted program found nearly half the imported consignments suspect, which is a warning about what routine paperwork can miss.

The irony is that the honey can be tested. Pollen is a honey's fingerprint — strip it out by ultra-filtration and you have erased the origin, which is itself a fraud red flag. But no one is looking at the honey to determine if it meets its claimed Caatinga forage, or if there is GM soy or maize pollen in it, is there glyphosate? The tools exist, melissopalynology, GM-PCR, residue screening, but they are not built into routine Canadian import clearance for organic honey.

What it means at our end of the deal

This is where it stops being abstract. Imported honey is taking both ends of our market. At retail, cheap imported "organic" undercuts domestic honey behind a label most Canadian farmland can't qualify for in the first place. In the ingredient trade, even cheaper conventional so-called "honey" from China, India, Vietnam and Argentina has pushed Canadian honey off processors' buy lists. Statistics Canada put the 2024 Canadian honey crop down 24.5% in value, to \$214.1 million. We are undercut on price and shut out of a standard our landscape can't meet in most cases. Yet imports whose conditions are far harder to verify than ours are routinely allowed to enter without scrutiny.

What we can do about it

Beekeepers need to demand proof. A few concrete steps:

- Push for testing. The CFIA does some testing for honey for sugar adulteration. It should extend that surveillance, for product sold as organic, to pollen (origin), GM-PCR and pesticides and to review whether NOP-certified honey should keep qualifying as Canada-organic through the equivalency back-door.
- Send the CBF brief to regulators. The Canadian Federation of Beekeepers (<https://www.canadianbeekeepers.ca>) has put these points to regulators in a formal submission; the more producers stand behind it, the harder it is to ignore.
- Encourage your organization to do testing. Pollen analysis runs about US\$75–100 at the Texas A&M palynology lab or Melliflora; GM and pesticide screening at QSI or FoodQS.
- Tell the origin story. Consumers should know that "organic" honey is not verified by the Canadian or US governments and should be aware of the dubious nature of the certification. Brazil's honey is a conundrum: the world's biggest grower of GM soy, described by industry sources as the world's biggest source of organic honey, waved across our border on a certificate Canada does not routinely check with pollen, GM-PCR or residue tests.

That paradox is exactly what it looks like — a question nobody has been required to answer.