FAIRTRADE MAGAZINE

Ashtyn Thali

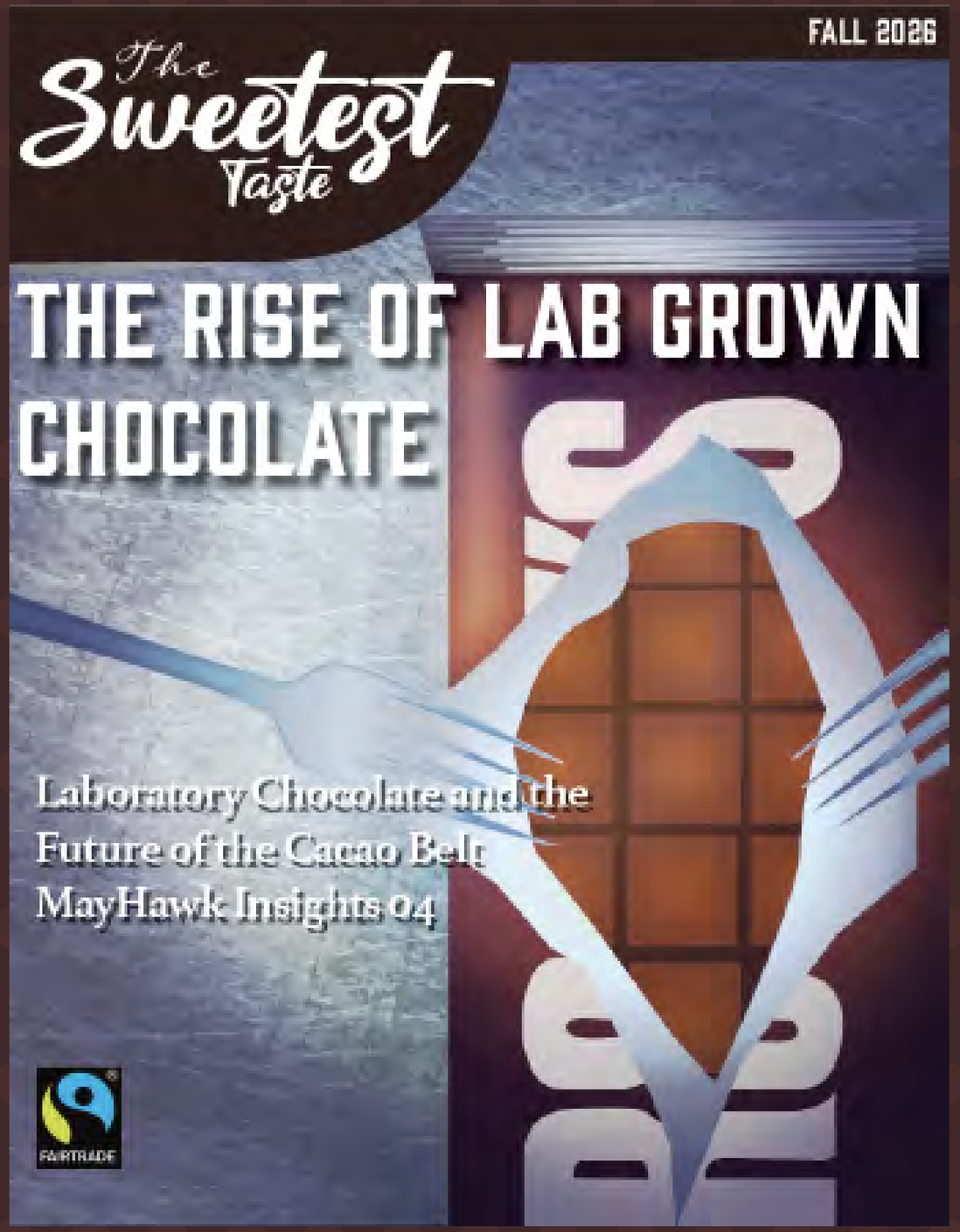
Goals & Objectives

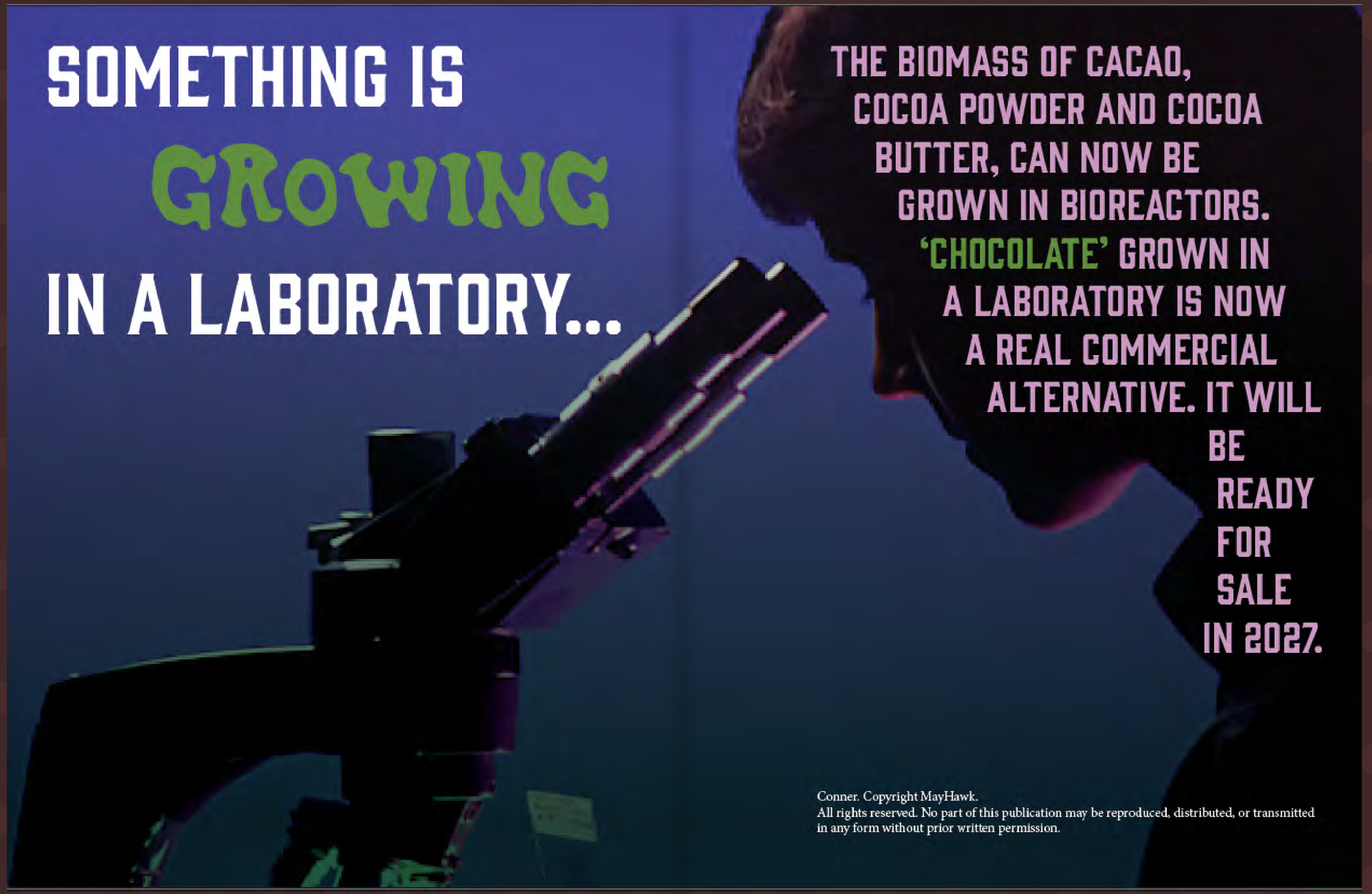
Goals
Sell products under the label of fairtrade, encouraging ethical consumption to drive sustainable growth, support communities, and protect resources.

Objectives
Gain a small following of around 50-100 readers by mid-2027.

Masthead




FALL 2026
The Sweetest Taste
THE RISE OF LAB GROWN CHOCOLATE
Laboratory Chocolate and the Future of the Cacao Belt
MayHawk Insights 04
FAIRTRADE



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Laboratory-grown chocolate is no longer a concept. It is a 2026 commercial reality, and it is moving faster than most of the industry has publicly acknowledged.

California Cultured, a company working with researchers at the University of California Davis, has demonstrated a proof-of-concept for growing cacao cells in a 1,600-litre bioreactor. The process begins with a small tissue sample taken from a cocoa bean or leaf, placed into a controlled environment of nutrients, water, and plant hormones, and grown into cocoa biomass — containing both cocoa solids and cocoa butter — without land, without pesticides, without farmers, and without the geographic and environmental constraints of the cacao belt. Commercial cocoa powder production is anticipated in early 2027.

"...Cocoa production in West Africa... fell by up to 40% between 2023 and 2025..."

In February 2026, Belgian ingredient supplier Puratos announced the world's first professional chocolate product containing cell-based cocoa, with a US commercial rollout planned by year end. Celleste Bio — an Israeli startup backed by Mondelēz International, the owner of Cadbury, Oreo, and Toblerone — introduced chocolate-grade prototypes using lab-grown cocoa butter in October 2025. Barry Callebaut, which supplies chocolate to most of the major brands most people have encountered, announced a partnership with California Cultured in August 2025 to develop cultivated cocoa at commercial scale.

This is not startup enthusiasm. It is a well funded disruptor economy mechanism. The future of industrial infrastructure in chocolate production is moving fast — and the consequences will be felt for decades.

The supply crisis that precipitated this investment was real and severe.

Cocoa production in West Africa — which accounts for approximately 70% of global supply — fell by up to 40% between 2023 and 2025. A combination of El Niño weather disruption, cocoa swollen shoot virus devastating crops across Ghana and Côte d'Ivoire, ageing tree stock, and prolonged drought drove the price of cocoa to $12,000 per tonne in early 2025 — the highest in decades. Lab-grown chocolate is the mean-reversion snap-back.

Economics can only stretch a chocolate bar so far before the consumer notices. Major manufacturers quietly reformulated products. Some bars became smaller. Ingredient lists changed. People noticed.

Out of all the arguments for industrial change, climate projection is the most troubling to the multinationals. Analysis by Wageningen University indicates that up to 50% of current cocoa-growing areas in Côte d'Ivoire could become unsuitable by 2060 due to shifting temperature and rainfall patterns.

The cacao tree is fragile — temperature-sensitive, disease-prone, confined to a narrow equatorial band. The bioreactor removes all of those vulnerabilities in a single step.

If you need a reliable supply of cocoa and the climate is making that supply increasingly unreliable, a controlled laboratory environment is a rational industrial response. That logic, born of economics, is coherent. What it excludes are the harder questions regarding 'people'.



"...up to 50% of current cocoa-growing areas in Côte d'Ivoire could become unsuitable by 2060..."

The companies investing most heavily in lab-grown chocolate are the same companies that have spent decades paying West African farmers far below subsistence wages.

In 2022, the global chocolate industry generated $206 billion in revenue. In the same year, cocoa farmers in West Africa often earned less than $2.15 per day — the World Bank's extreme poverty threshold. The living income differential has been acknowledged by the industry for over two decades. It has not been closed.

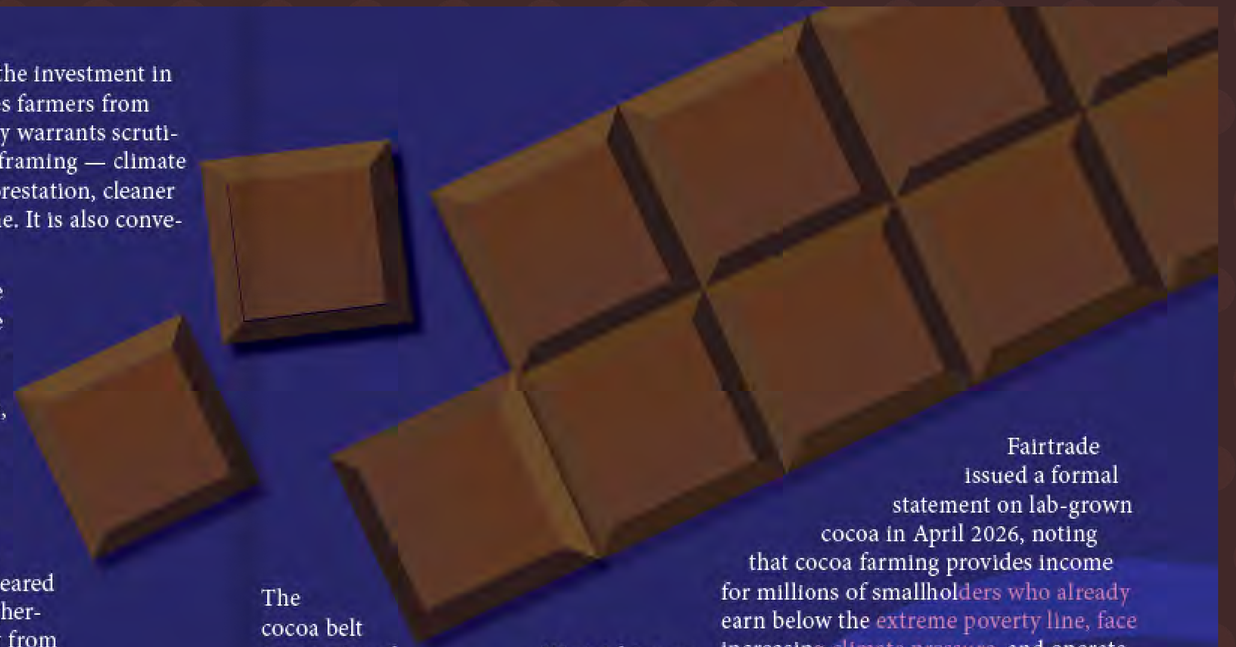
The Corporate Accountability Lab documented in 2023 that child labour remains endemic across the cocoa supply chain — not as a cultural anomaly, but as a direct economic consequence of poverty wages. Farmers who cannot afford adult labour use their children. The industry has known this. The certifications have not resolved it.

Against this backdrop, the investment in technology that removes farmers from the supply chain entirely warrants scrutiny. The environmental framing — climate resilience, reduced deforestation, cleaner production — is genuine. It is also convenient.

The environmental case for lab-grown chocolate is real, but incomplete.

Between 2001 and 2023, Ghana lost 24% of its total tree coverage and Côte d'Ivoire 26% — driven significantly by the expansion of cocoa farming as producers cleared older forest to plant higher-yield trees. A shift away from land-intensive cocoa farming would reduce this pressure. That is measurable.

But bioreactors are energy-intensive. The carbon footprint of industrial biomanufacturing at commercial scale has not been fully calculated, and none of the major developers has made this calculation transparently. The environmental argument depends entirely on what powers the production facility. Renewable energy produces a credible case. A fossil fuel grid substantially undermines it.



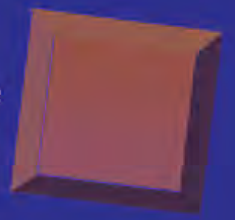
The cocoa belt economies of West Africa are monocultural in a way that makes them acutely fragile. Ghana and Côte d'Ivoire produce approximately 70% of the world's cocoa. For the rural communities built around that harvest, cocoa is not one of several options. It is the economy.

When industrial demand for a single commodity collapses in a monocultural agricultural system, the consequences move faster than any policy response can address. The Ethiopian famine of the 1980s and the structural collapse of single-commodity agricultural economies across sub-Saharan Africa in subsequent decades are documented precedent.

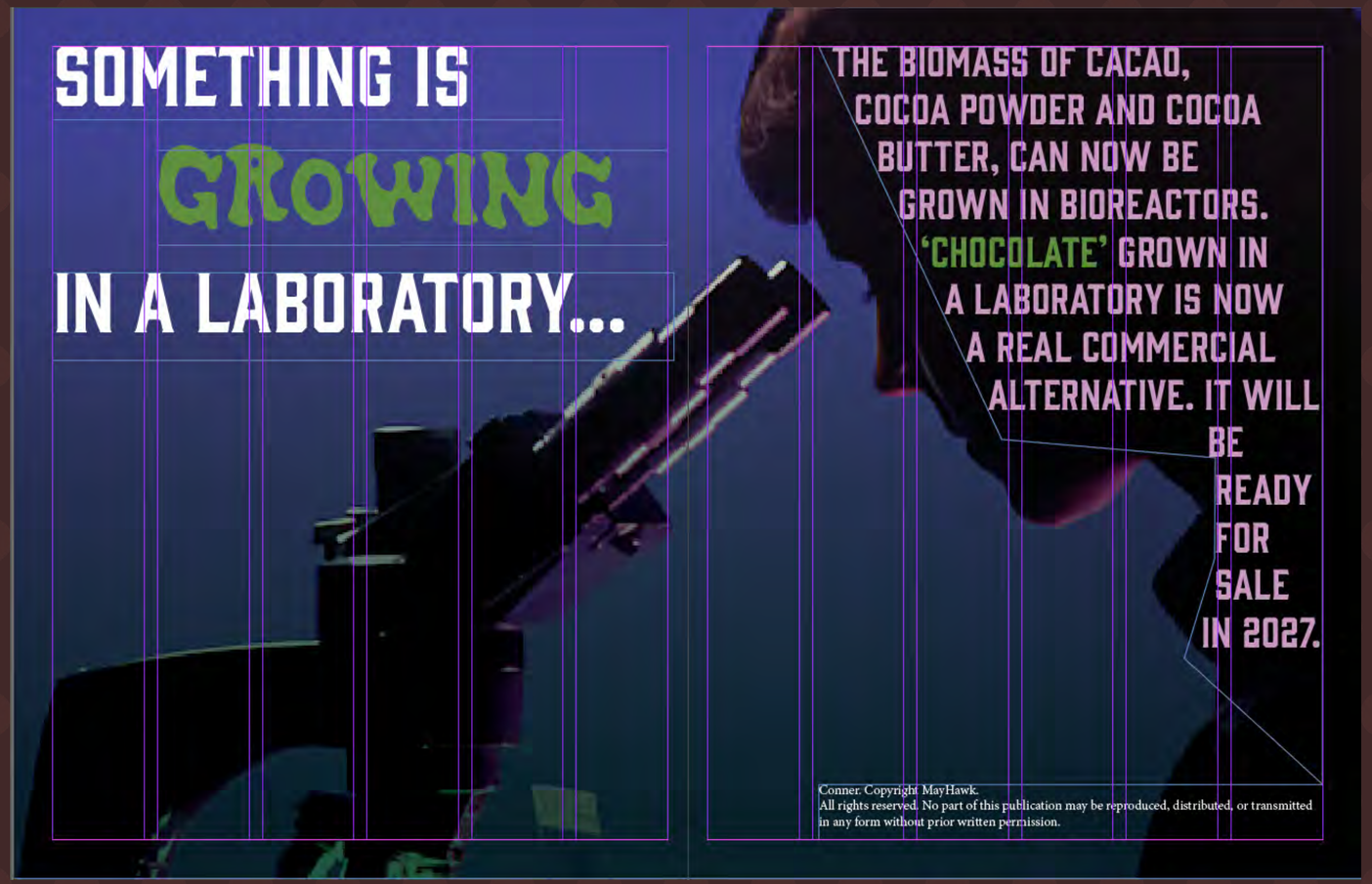
Fairtrade issued a formal statement on lab-grown cocoa in April 2026, noting that cocoa farming provides income for millions of smallholders who already earn below the extreme poverty line, face increasing climate pressure, and operate in volatile global markets. Its position: any shift toward lab-grown alternatives must not make the people who grow the world's cocoa more vulnerable.

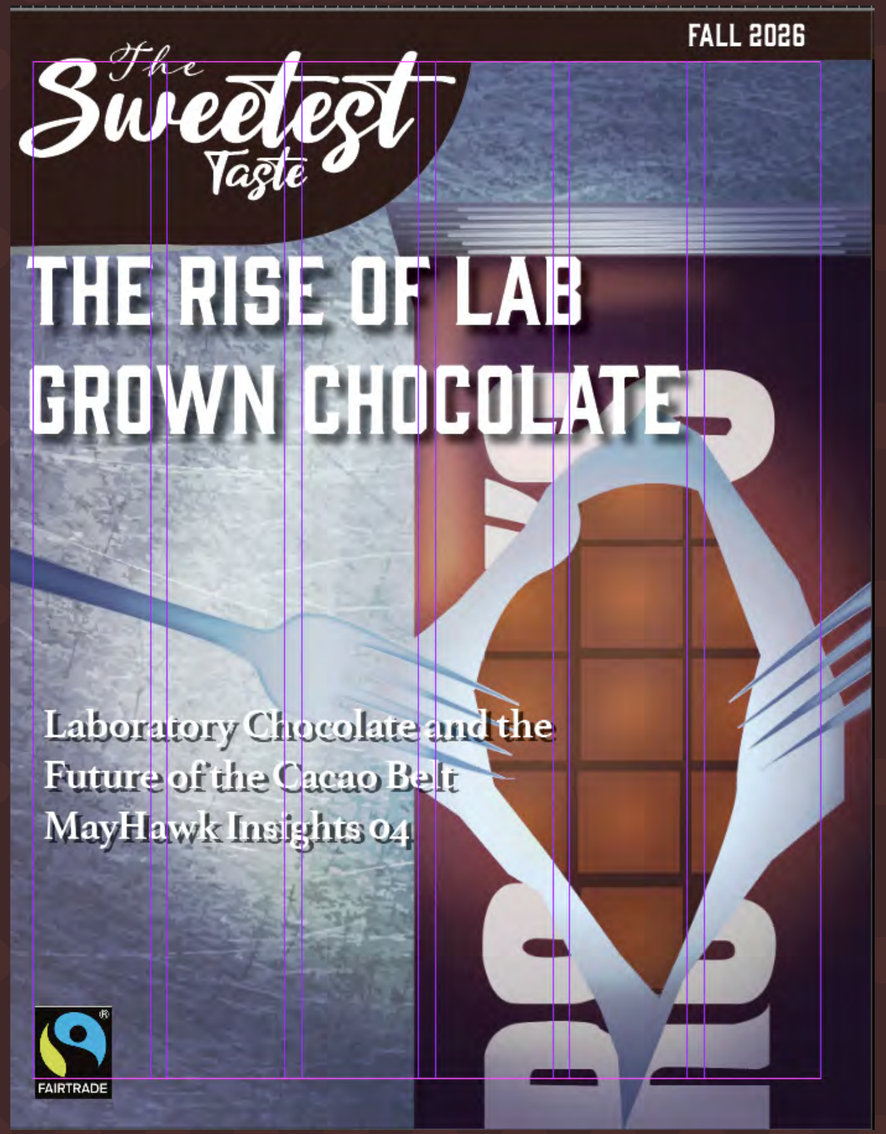
The question the industry has not yet answered is this: if lab-grown chocolate achieves price parity with farmed cocoa at industrial scale, what happens to the five million people whose livelihoods depend on the alternative?

"...child labour remains endemic across the cocoa supply chain..."



Grids


SOMETHING IS
GROWING
IN A LABORATORY...
THE BIOMASS OF CACAO, COCOA POWDER AND COCOA BUTTER, CAN NOW BE GROWN IN BIOREACTORS. 'CHOCOLATE' GROWN IN A LABORATORY IS NOW A REAL COMMERCIAL ALTERNATIVE. IT WILL BE READY FOR SALE IN 2027.
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FALL 2026
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THE RISE OF LAB GROWN CHOCOLATE
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The Sweetest Taste

Chocolate

Candy | Cakes | Farming

Results for: Chocolate



The rise of lab grown chocolate: Insights on a rapidly changing cocoa industry...

...The implications for the five to six million smallholder farmers who grow the world's cocoa — across West Africa, Latin America, and Asia — are only just beginning to be understood...

Candy | Fairtrade | Read Now



Terrifying Changes to Prices makes Halloween Candy Getting Too Expensive to Give Away?

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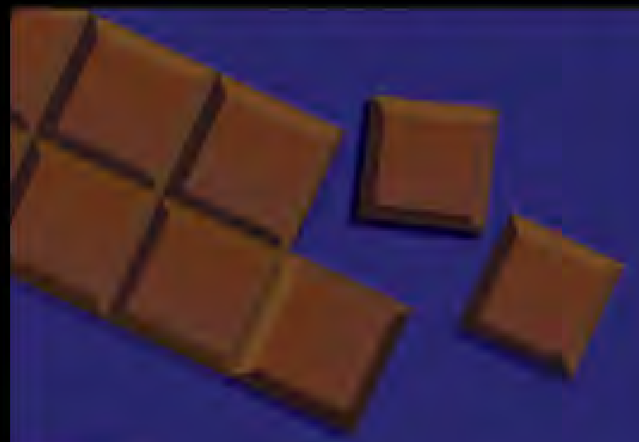
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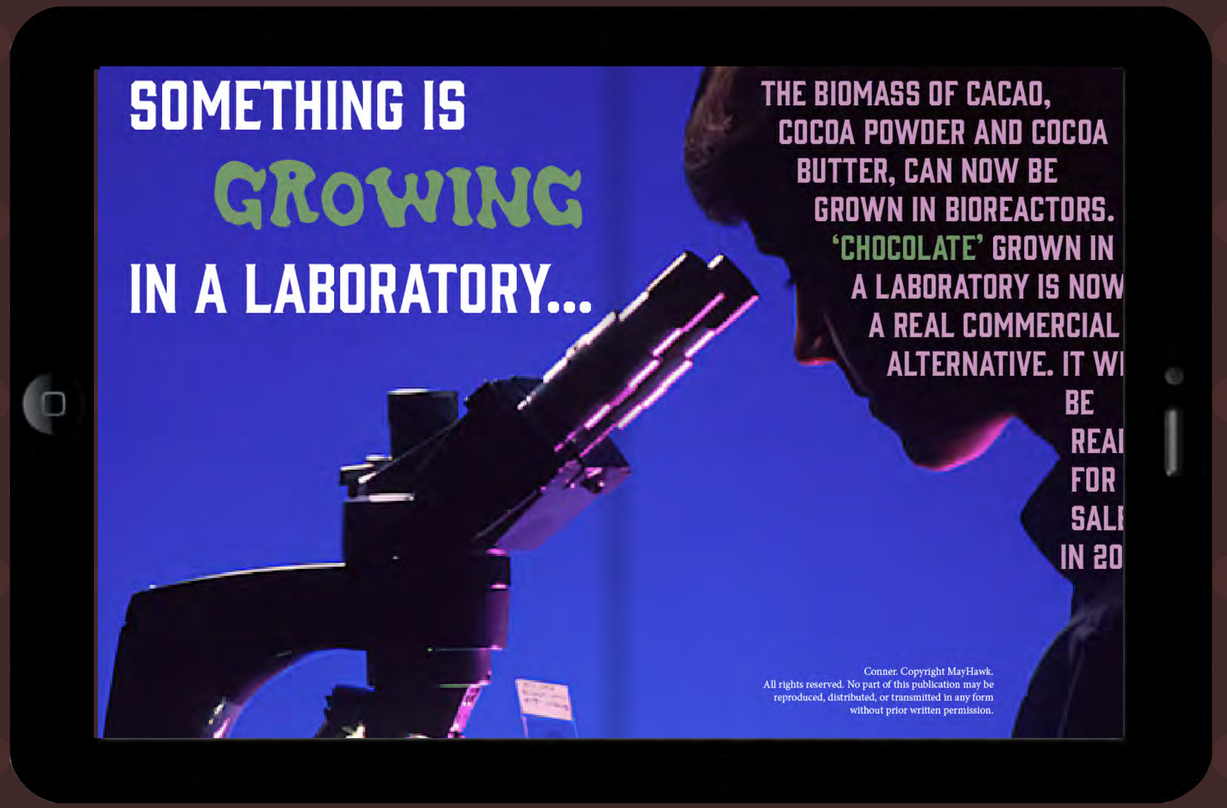
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