

Beekeeping Microcredit – Colombia

Designing, piloting, and scaling beekeeping (honey) micro-credit & piloting rural agent network

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Executive Summary

The Appiaria programme expanded access to affordable, productive digital credit for smallholder beekeepers in Colombia's conflict-affected Bajo Cauca region by embedding finance directly into the honey value chain.

Implemented by [IMIX](#) and [2M](#) with support from [Swiss Capacity Building Facility \(SCBF\)](#), the project reached 4,292 beneficiaries, 45% women, with 78% accessing formal credit for the first time. Fully digital, branchless processes reduced travel and transaction time by over 95%, addressing key barriers faced by dispersed rural producers, many likely affected by displacement and armed violence.

Credit was delivered mainly in kind (productive inputs) and repaid automatically through deductions at honey sales, ensuring alignment with production cycles and productive use of funds. Pricing was significantly lower than informal "shark loans" (200–300% annually) and traditional rural microcredit (40–55% APR), making finance affordable and sustainable. Portfolio performance was strong, with only 0.52% of loan in arrears.

Rising honey prices (COP 10,000 to COP 12,200/kg) increased producer incomes, and the total value of commercialized honey grew from USD 3 mil. to USD 3.3 mil. year-on-year.

The project demonstrated that off-takers and aggregators are more effective than traditional financial institutions in delivering rural productive finance, as they can leverage existing trust, commercial relationships, and real transaction data. These results informed the creation of Imix Nova, a scalable productive-finance vehicle designed to extend digital, value-chain-embedded credit across agricultural sectors in Colombia and beyond.



Appiaria

ECOSISTEMA DIGITAL

Project by:



Consultores en Estrategia y Desarrollo S.A.S.

Supported by:



BEEKEEPING AND RURAL FINANCIAL INCLUSION IN COLOMBIA

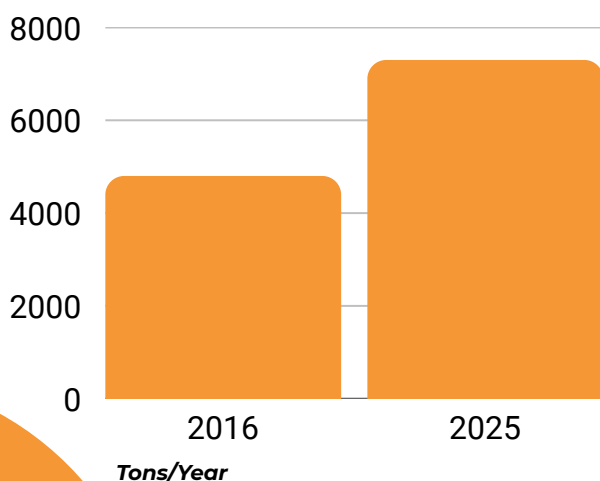
Beekeeping is an agricultural activity with immense environmental, economic, and social potential in Colombia, yet it remains underdeveloped. Despite being a naturally sustainable practice, it has historically received little institutional support or access to financing.

Over the past decade, national production of honey has grown from 4,800 tons in 2016 to 7,300 tons in 2025, while domestic and international demand has surged beyond 1,9 M tons per year (11,000 international trade).

The trend reflects a global shift toward natural and functional foods: honey is increasingly valued as a healthy and organic sweetener, a natural preservative, and a key ingredient in cosmetic, pharmaceutical, and wellness industries. In Colombia, consumption has also expanded as consumers seek alternatives to refined sugar and processed ingredients.



Honey Production



Source: Ministerio de Agricultura de Colombia

However, 95% of the country's honey is still produced by small-scale rural families living in poverty and operating in areas affected by armed conflict. Despite its growth potential, apiculture remains largely informal and underfinanced.

From an environmental perspective, beekeeping stands out among rural livelihoods. It does not require land-use change and is inherently regenerative: bees contribute to pollination, biodiversity, and the health of ecosystems, providing essential services to crops and native flora. Every beehive installed represents a step toward more sustainable land management and climate resilience.

The financial system has not adapted to support this type of productive activity, nor to reach small rural producers.

According to the 2024 Financial Inclusion Report (**Banca de las Oportunidades**), only 17.1% of adults in dispersed rural areas have access to formal credit, compared to 41.8% in urban centers — a gap of 35 percentage points that continues to widen.

Credit in rural zones is more expensive (average 55% APR) and less accessible for women, who face stricter requirements and higher costs.



Through the Appiaria pilot, IMIX and 2M demonstrated that productive trust can serve as a reliable proxy for creditworthiness.

The system:

- Digitally originates working-capital credit based on verified relationships and transaction history within the value chain.
- Disburses mostly against financed inputs, ensuring that funds are used for production rather than consumption.
- Repays automatically from harvest sales, with discounts applied at the point of purchase by the buyer.

This model embodies a new form of embedded, regenerative finance, aligned with rural sustainability and inclusion goals. It combines digital traceability with human relationships — what IMIX calls “trust turned into data” — and proves that digital credit can flow safely to the most excluded producers when anchored in real value chains.

Traditional financial institutions — including public development banks — have not succeeded in reaching these producers, who lack formal collateral and digital visibility. As a result, the rural economy still operates largely through informal lending and relationship-based trust, rather than data or financial records.

Acá Se Fía, the digital platform behind the Appiaria project, introduces a hybrid relational-digital model that converts productive trust into actionable financial data. By leveraging the relationships between buyers, associations, and small producers, the platform enables the digital origination of productive credit tied to real economic activity.



INTERVENTION APPROACH

Colombia's beekeeping sector holds enormous potential—both as a source of income for rural families and as a regenerative activity that strengthens ecosystems. Yet the smallholder beekeepers who sustain this sector are among the most financially excluded populations in the country. Despite growing demand and rising honey prices, access to credit remained out of reach. Traditional microfinance channels were slow, paperwork-heavy, and designed for borrowers who lived near bank branches—not for producers working deep in rural areas, often without signal, transportation, or formal documentation.

In practice, beekeepers had little choice but to rely on informal lenders or advance payments from intermediaries. This reality ultimately pushed the project to rethink its strategy—laying the groundwork for intervention pivot and project key finding.

Financial Inclusion Needs Assessment

The needs assessment conducted by IMIX and 2M confirmed three main barriers to inclusion:

1. Lack of accessible credit products adapted to short agricultural cycles and small working capital needs.
2. Weak financial infrastructure in rural areas with limited connectivity and long distances to bank branches.
3. High dependence on trust-based relationships with buyers and local associations, which, although strong, had never been transformed into measurable or bankable data.

These findings laid the foundation for testing Acá Se Fía, a hybrid relational-digital model designed to turn productive trust into actionable data for credit origination and repayment.

From Traditional Microfinance to Value-Chain-Embedded Finance

The intervention was initially designed to be implemented through formal Financial Service Providers (FSPs), who would use the Acá Se Fía platform to originate and manage productive credit for beekeepers. However, early implementation revealed major constraints: low FSP appetite for this client segment, long and inflexible approval processes, documentation requirements unsuitable for rural contexts, and limited operational reach into dispersed areas. Given these challenges, the project shifted to a value-chain approach, partnering directly with off-takers who already had trust-based relationships, distribution networks, and real-time data on producers. This pivot enabled faster onboarding, better targeting, and repayment aligned with honey sales.



Main Activity Areas, Goals, and Outputs

- Designing and piloting a “purchase advance” and “honey microcredit” credit models, disbursed as working capital for honey production and repaid at harvest through price deductions.
- Training local agents on digital operations and trust-based credit origination through network operated by community organizations within the aggregators’ ecosystems.
- Integrating aggregators (Campo Dulce, Riosierra, La Urbana, Victorius) to replace traditional community-based organizations (CBOs), enabling faster scaling and operational efficiency.
- Developing offline and conversational functionalities in the Acá Se Fía platform to overcome connectivity barriers.
- Piloting interoperability with digital wallets (Nequi) for disbursement, ensuring producers received funds electronically rather than in cash.

Client Pricing & Product Design

The credit product provided working-capital financing through credit-in-kind (inputs, wax foundation, safety equipment, nuclei). Prices were transparent and aligned with local market rates. No additional fees were charged. Repayment occurred at the moment of honey sale, ensuring affordability and eliminating cash-flow pressure on producers.

Training & Capacity Building

The project delivered practical training to 120 field agents and producer leaders on platform use, digital referrals, loan utilization processes, and honey-quality standards.

Training materials was based on video-based tutorials, WhatsApp conversational guidance, and offline modules to accommodate low-connectivity environments.

Gender-Inclusive Design

Women beekeepers—who often manage household-level apiaries—benefited from simplified onboarding, low-documentation requirements, home-based verification through value-chain partners, and repayment mechanisms that did not require travel to financial institutions. These adaptations resulted in 1938 women credit recipients (45%).

Women’s Participation

While women represent an estimated 55% of beekeepers in the region, the project reached 45% due to contextual shifts during implementation. Rising gold prices drew many women into short-term roles supporting informal mining, and the withdrawal of USAID programs reduced technical assistance for female-led apiaries, temporarily affecting their engagement in beekeeping activities.

Conflict / Displacement / Illegal Mining

Although the project did not directly measure conflict-victimization at the beneficiary level, the Bajo Cauca region is one of Colombia’s most affected areas, with 46% of its population registered as victims of the armed conflict—more than double the national average.

Given this context, it is highly likely that a significant share of Appiarias participants fall within this population, many of whom face economic pressures linked to displacement and the expansion of informal mining activities.

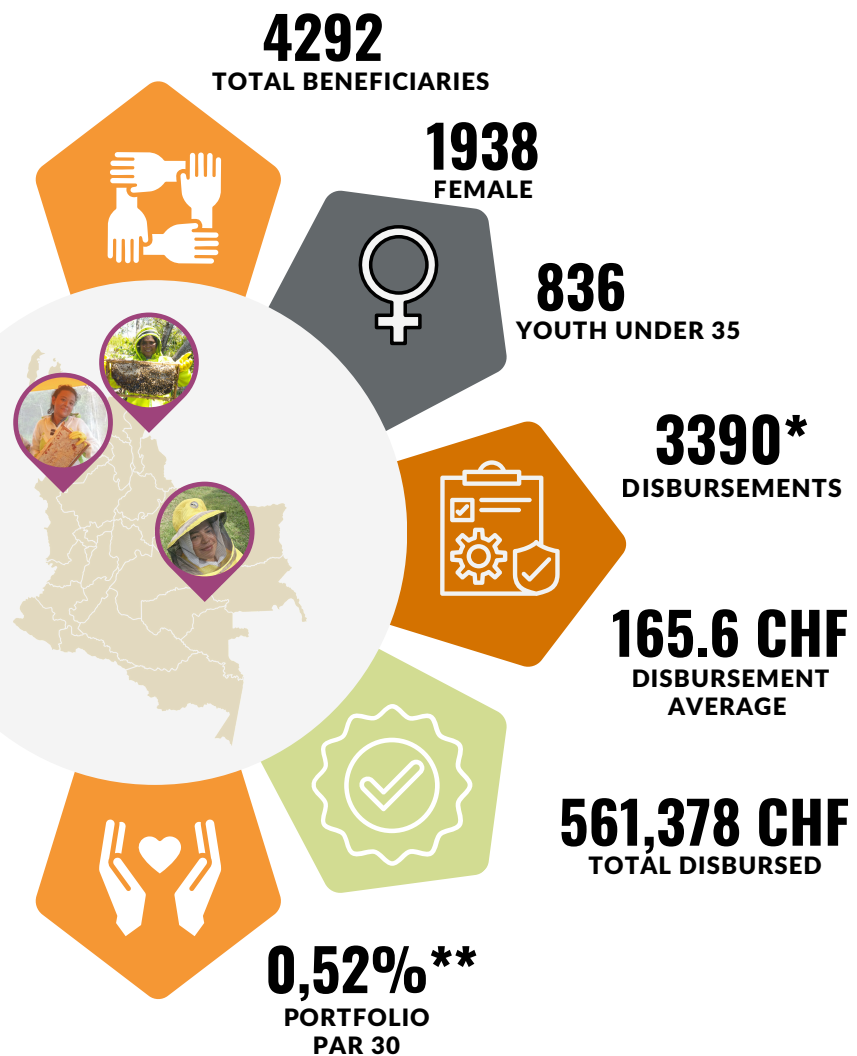
PROJECT OUTPUTS



The success of **Appiaria** embedded finance pilot has proven that the **Acá Se Fía** model works: by linking technology, productive networks, and community trust, it is possible to reach small producers who were invisible to the formal financial system — enabling true financial inclusion, sustainable production, and environmental regeneration. This operational model validated the feasibility of using data derived from commercial transactions and community trust to enable digital, low-risk productive lending in rural Colombia

The project achieved strong performance across all output indicators, demonstrating both the operational effectiveness of the **Acá Se Fía** model and the relevance of value-chain-embedded finance in rural contexts.

- The project began in the Bajo Cauca region and later expanded into two additional territories—Bolívar and Casanare/Meta—through the operational reach of participating aggregators.
- Interest rates offered at a fraction of prevailing costs, compared with informal “shark loans” charging the equivalent of 200–300% annually and traditional microcredit rates of 40–45%, making productive credit substantially more affordable for rural beekeepers.
- 78% of beneficiaries accessed a formalized credit product for the first time.
- Travel and transaction time decreased by over 95% thanks to digital, branchless onboarding.
- Rising honey prices (COP 10,000 → COP 12,200/kg) generated a significant increase in producer income, with total commercialized value rising from USD 3M to USD 3.3M year-on-year.
- Referral efficiency reached 100%, confirming precise targeting through value-chain partners.



* Beneficiaries exceed disbursements because many family-run apiaries include multiple individuals supported by a single productive credit.

** PAR 0.52% refers to portfolio in arrears, meaning that less than 1% of loans were overdue

Additional Funders:



PARTNERSHIP MODEL

The project was implemented through a multi-stakeholder partnership that combined digital innovation, productive-sector anchoring, and local rural presence.



IMIX Colombia S.A.S. – A fintech company specializing in inclusive digital infrastructure. IMIX developed and operates Acá Se Fía, the technology enabling hybrid origination, disbursement, and repayment of productive loans.

IMIX served as the lead implementer and technology provider, responsible for designing the Acá Se Fía platform, integrating identity verification and offline workflows, managing data analytics, and ensuring digital credit origination aligned with value-chain operations.



The anchor company in the beekeeping value chain. 2M purchases, processes, and commercializes honey while coordinating with producer associations. In the project, 2M acted as the commercial bridge linking producers, buyers, and financiers, providing liquidity and ensuring repayment through purchase contracts.

2M facilitated producer outreach, verified productive activity, coordinated delivery of credit-in-kind (inputs, wax, nuclei), repaid loans through harvest sales, and ensured field-level operational continuity.

Local aggregators and CBO-equivalent entities such as Campo Dulce, Victorius, Riosierra, La Urbana, and AGRAMPI contributed to producer mobilization across remote rural zones.

This collaboration ensured that the model integrated digital tools with trust-based commercial relationships, consistent with global trends showing that value-chain actors originate most smallholder credit (**ISF Advisors*).

Financial sector partners: participated in pilot; however, operational constraints prevented them from scaling rural credit delivery.

- **Banco de Bogota** – provided working capital credit to 2M that was the main source of the advance purchase credits disbursed during the project
- **Banco Agrario de Colombia** and **CFA Cooperativa Financiera de Antioquia** – engaged through a pilot alliance that resulted in few and delayed disbursements, underscoring the limitations of traditional banking for rural clients.
- **MiBanco** and **Banco Contactar** – participated in pilot collaborations but did not approve loans due to logistical and procedural constraints.



Together, these partners validated a hybrid model where fintechs, buyers, and aggregators can perform credit origination functions typically handled by financial institutions — expanding access to the last mile of Colombia's rural economy.

Results: Achieved / Not Achieved

Client-Level Results

The **Appiaria** pilot successfully demonstrated that digital productive credit can work for rural producers when it is designed around their real economy — financing inputs instead of cash and aligning repayment with harvest cycles.

By integrating **Acá Se Fía** hybrid model, the project reached +4,000 beneficiaries, of whom 45% were women and 19% were youth (under 35 years old). More than 3,000 productive credits were disbursed, mostly against financed inputs such as wax, safety gear, and beekeeping nuclei.

Repayments were structured through automatic deductions from honey sales, creating a natural, low-friction mechanism that reduced default risk and improved liquidity for small producers.

Clients emphasized three key benefits:

- Access to credit for the first time, without collateral or paperwork.
- Financing delivered as productive goods, not cash.
- Simple and fair repayment deducted directly from the harvest.

These features collectively built financial confidence, strengthened production capacity, and validated the feasibility of digital, trust-based credit models in Colombia's dispersed rural regions.



Institutional-Level Results

The project provided valuable insights into the opportunities and limitations of current rural finance models in Colombia.

While the pilot proved that productive value chains and fintechs can originate and manage microcredit effectively, it also revealed the structural barriers faced by traditional microfinance institutions.

Collaborations were initiated with Banco Contactar, Banco Agrario, MiBanco and CFA to test the integration of the Appiarias model into their credit origination processes. However, despite strong interest at the corporate level, pilots failed in approved loans.

Field agents faced logistical constraints, and credit policies required documentation and on-site visits incompatible with rural conditions. These experiences confirmed that the existing microfinance framework is still too expensive for rural clients, and remains too rigid to accommodate remote agricultural producers. By contrast, the Acá Se Fía model demonstrated a viable alternative: credit origination based on trust, commercial relationships, and real productive data, where financing flows from aggregators and fintech partners rather than traditional banks.

Trust-Driven, Data-Enabled Credit Origination

The project's strategy was grounded in a simple but powerful principle: transforming the trust that already exists within rural communities into actionable data that enables access to finance.

In refining the credit methodology, the project incorporated proven practices from traditional microfinance, particularly character-based assessments rooted in community validation. Field agents and off-takers routinely asked trusted members of the community simple but meaningful questions—"Do you know this person personally? Is she responsible, orderly, reliable, and committed?"

These informal yet powerful references, combined with productive-sector indicators such as years of beekeeping experience, number of active hives, historical purchase volumes, and honey price trends, strengthened the credit decision process.

This hybrid approach—merging community-level trust signals with value-chain transaction data—proved far more predictive of repayment capacity than conventional documentation-based methods used by FSPs.



Client Feedback

Customer feedback collected during the pilot shows consistently high levels of satisfaction with the Appiarias service.

42%
Very Satisfied

57%
Satisfied

100%
NPS*

These results reinforce the acceptance of value-chain-embedded credit and confirm that simple onboarding, timely access to inputs, and repayment at harvest are features that resonate deeply with rural producers.

Note: Client Satisfaction Methodology used: Direct Survey to 60 beneficiaries.

Meet the Beekeepers



View online Report with
Video Testimonials



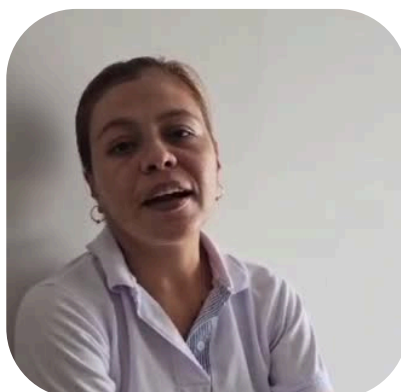
Rosana Pineda,
Beekeeper from Cauca, Antioquia

Rosana lives in the rural outskirts of Cauca, where she has dedicated herself to beekeeping for several years. Like many small producers, she had never been able to access formal credit—banks were too far away and required documentation she didn't have

"Thanks to Appiaria, I received the wax I needed to multiply my hives. I paid it back with my harvest — it's simple and fair."

Liliana Vasquez *Beekeeper, Puerto Colombia*

Liliana lives in the rural community of Puerto Colombia, where she manages 30 beehives. Through the Appiaria platform, she was able to finance her safety equipment, essential for handling bees and harvesting honey.



"I received my order on time, with a good price and an excellent payment method."



Gladys Martinez *Beekeeper from Colorado, Antioquia*

Gladys has 20 hives in a forest in the Colorado area. She and her fellow beekeepers from the association need a bigger productive loan for a small vehicle that allows transportation of beekeepers and honey.

"We are thankful to Appiaria, because I received nuclei to multiply my hives."

Andres Ayala *Beekeeper, Agrampi President*

As president of the AGRAMPI beekeepers' association, Andrés Ayala leads a group of small producers determined to professionalize honey production in their region. Through the Appiarias platform, the association was able to finance new beekeeping nuclei, helping its members expand production and increase collective honey output. The process was simple and transparent: producers received the financed inputs they needed, and repayments were automatically deducted from the proceeds of their honey sales.



"Appiaria gives us access to safe credit for our inputs and tools, and we repay it with our harvest. It helps us grow as beekeepers while protecting the environment."

LESSONS LEARNT & SUSTAINABILITY

Appiaria demonstrated that embedded, value-chain-driven credit achieves higher reach, lower cost, and stronger repayment performance than traditional rural microfinance. Attempts to partner with MFIs showed structural misalignment with rural production cycles, further confirming the relevance of this model.

Key Lessons Include:



Credit in kind, not in cash: Financing inputs (wax, nuclei, equipment) rather than cash ensures that credit directly strengthens productivity.



Repayment through harvest deductions: Aligning repayment with the production cycle removes repayment pressure and ensures timely recovery.



Hybrid digital-relational model: Field relationships remain crucial; technology amplifies trust, it doesn't replace it.



Traditional institutions are constrained: Existing microfinance policies are not adapted to rural realities and require rethinking.



Trust as a data source: Relationships between buyers, associations, and producers can serve as a proxy for risk assessment.



Recommendations

- Design credit products around the production cycle, ensuring repayment occurs at harvest to reduce pressure on smallholders.
- Leverage value-chain actors as primary originators, given their proximity, trust, and superior ability to assess productive activity.
- Implement offline-first and low-bandwidth workflows, essential for rural operations.
- Adopt credit-in-kind structures to ensure loan use for productive purposes and reduce misuse risk.
- Use formal MFIs and banks selectively for rural origination, as their processes, timelines, and documentation requirements may not always match smallholder realities.

Investment Mobilization

The project catalyzed new funding pathways, including:

- A confirming/factoring partnership in negotiation, expected to unlock liquidity for 2M and Biomieles.
- Early-stage discussions with impact investors
- Foundational work toward the capitalization of Imix Nova, a dedicated direct-lending vehicle designed to scale productive credit for rural producers.



The pilot validated global findings (ISF Advisors) showing that off-takers provide up to 90% of smallholder credit, while formal FSPs contribute marginally**

Way Forward : The Transition to Imix Nova

Building on the strong results of the Appiarias pilot, the next phase focuses on scaling productive digital credit through **Imix Nova**, a newly established direct-lending entity created to operate where MFIs and banks structurally cannot. The scaling plan includes:

Imix Nova

One of the most significant outcomes of the Appiarias pilot has been IMIX's strategic decision to evolve from a pure SaaS (Software as a Service) business model into a direct financing actor. This evolution led to the creation of Imix Nova, a new special-purpose vehicle (SPV) within the IMIX group designed to manage and scale digital productive credit across value chains.

Replication Beyond Beekeeping

The model created under Appiarias is now being replicated with small Hass avocado producers. This sector, worth over USD 300 million in exports and involving more than 8,000 smallholders, uses the same advance-payment and harvest-repayment method proven with beekeepers.

In 2025 alone, more than 450 tons of avocado valued at USD 400,000 were traded under this system, showing the model's scalability and relevance across value chains.

The recently created company Imix Nova will:



Operate as the credit arm of the IMIX group, channeling blended capital directly to rural producers through the Acá Se Fía platform.



Leverage the digital infrastructure to originate, monitor, and manage repayment of productive loans.



Mobilize alternative funding sources, including confirming and factoring mechanisms with anchor buyers, fintech-backed facilities, and structured debt from impact investors.



Replicate the success of Appiaria in other sectors such as avocado, cacao, and rice, expanding the reach of inclusive, data-driven productive finance across Latin America.



Imix Nova business model shift reflects a fundamental lesson: digital inclusion requires financial autonomy. Sustainable inclusion will not depend solely on the appetite of traditional banks but on building independent, blended-capital mechanisms that can reach underserved producers directly.

"Appiaria proved that trust can be turned into data – and data into credit. Imix Nova is the next step to make that transformation permanent."

Sandra Rubio, Imix CEO