Expert Interviews - Zambia Report

Objective

This report compiles insights gathered from four expert interviews conducted to understand the challenges and opportunities within Zambia's agricultural sector, particularly concerning certifications, credentials, and authentication. The goal is to align project solutions with local realities, ensuring their effectiveness in addressing key issues.

Key Topics Discussed

1. **Challenges in Certifications, Credentials, and Authentication:**
   - The fragmented and rigorous requirements for global certifications.
   - Fraud and adulteration issues in Zambia's honey industry.
   - Lack of standardized processes for traceability and data capture.

2. **Regulatory Landscape and Education Needs:**
   - Role of the Zambia Bureau of Standards in setting benchmarks.
   - Gaps in producer awareness and need for targeted education programs.

3. **Potential of Blockchain and Technology:**
   - Blockchain's role in streamlining data management and enhancing traceability.
   - Barriers to digital adoption and offline solutions for remote areas.
   - How the pilot can fit into a broader ecosystem leveraging blockchain technology from DIDs, financial services and more.

Interviewees

1. Katherine Milling

Role: Co-Founder and CEO, Nature's Nectar
Background: Katherine co-founded Nature's Nectar, a honey company based in Zambia, in 2018. The company distributes beehives to over 2,500 farmers, trains them, and purchases honey for processing and export. Katherine resides in Lusaka, where she oversees the business, focusing on addressing challenges in certifications, credentials, and product authentication.

2. Nathalie Simwami Stamos

Role: Cross-Industry Expert
Background: Nathalie, based in Lusaka, has a legal background and broad experience across agriculture, technology, commodities, and hospitality. She has implemented projects in several African markets and provided insights into systemic barriers and potential opportunities in Zambia.

3. William Katongo

Role: Former Director, Department of Technology
Background: William has extensive experience in Zambia's regulatory landscape, having worked on digital transformation initiatives across multiple governmental departments. His knowledge spans technology and its application in agriculture and other industries.

4. Kyle Curry

Role: Co-Founder, Nature's Nectar; Co-Founder, The Savings Network
Background: Kyle has a background in economic development and digital financial inclusion initiatives. He has worked in Zambia since 2014, including a tenure with the Peace Corps, focusing on agriculture and social impact through technology.

Key Findings

1. Challenges in Certifications and Data Authentication

Key Issue: Meeting certification requirements for export markets is one of the most significant barriers for Zambian producers.

- **Certification Complexity:**
  - Export markets like the EU and U.S. have fragmented requirements, including food safety, organic certifications, and proof of social compliance.

  - Certifications require detailed records of activities, such as farmer training, contamination risk assessments, and site visits.

  - Audits demand verifiable logs to ensure compliance, which can be overwhelming for small and medium producers.

- **Fraud and Adulteration:**
  - Honey is among the top three most adulterated foods globally. Common practices include mixing honey with cheaper sugars or liquids to lower costs and prevent crystallization.

  - Consumer misconceptions around crystallized honey exacerbate the problem. Education is needed to address these false perceptions.

  - Forging traceability documents and certificates is common, as Zambia lacks robust mechanisms to validate origin and quality.

- **Data Management Gaps:**
  - Producers often use disconnected systems for data capture, processing, and record-keeping.

  - Nature's Nectar highlights the challenge of maintaining accurate, unified records across the supply chain, from field activities to factory processing.

2. Regulatory Landscape and Local Context

Key Issue: The existing regulatory environment, while improving, lacks comprehensive support for producers navigating export requirements.

- **Zambia Bureau of Standards (ZABS):**

- ○ ZABS sets standards for products, but awareness and accessibility of these standards among producers remain low.

- ○ Processes for certification can be lengthy and resource-intensive, discouraging compliance.

- **Education and Awareness:**
  - ○ Producers often lack knowledge about export requirements and certifications.

  - ○ Nathalie emphasized the importance of delivering educational programs in culturally appropriate ways to foster trust and understanding.

  - ○ Educating producers on certification benefits and processes can drive compliance and market access.

3. Role of Blockchain and Technology in Traceability

Key Issue: Blockchain offers a potential solution to streamline traceability, but its implementation faces infrastructural and educational barriers.

- **Streamlining Traceability:**
  - ○ Katherine highlighted how blockchain could integrate disconnected systems into a unified platform, improving data visibility from the field to the factory.

  - ○ Blockchain can help link purchase dates, processing records, and export activities, ensuring compliance with global certification requirements.

- **Offline Solutions:**
  - ○ Many rural areas in Zambia lack reliable internet connectivity. Offline-first technologies are critical for recording data in remote sourcing locations. This is key issue to address regardless of using blockchain or non-blockchain solutions.

- **Adoption Barriers:**
  - ○ Digital adoption in Zambia is growing but remains limited in rural areas.

  - ○ Infrastructure challenges, such as poor road networks and weak cellular coverage, impede technology rollouts.

  - ○ Education on using digital tools, including blockchain platforms, is essential to bridge the gap between technology and users.

- **The Role of Traceability Data in the Broader Blockchain Ecosystem:**

- Kyle highlighted how an implementation for traceability can provide much needed data required to tackle a number of adjacent challenges such as micro-finance. If the traceability system can assign identity to farmers and track their inputs (such as transaction records, honeycomb yield, location, etc…) - this can be extremely useful for financial service institutions.

- Having an idea about how it fits into the broader scope of opportunities should be highlighted. This might mean bringing other stakeholders together after a successful pilot that is outside of our target industry to get their insights. However, for the purpose of the minimum viable ecosystem; not crucial.

4. Broader Implementation Needs

Key Issue: A successful rollout of technology-based solutions requires tailored strategies that address Zambia's unique challenges & the important role of partners on the ground. .

- **Local Expertise:**
  - Nathalie and William emphasized the importance of involving local stakeholders who understand the realities on the ground.

  - Partnerships with government ministries (e.g., Agriculture, Technology) can align initiatives with national priorities and unlock resources.

- **Scalability:**
  - William suggested that pilot projects, if successful, could be scaled to other commodities and markets.

  - Collaboration with cross-industry players, such as the Ministry of Green Economy, could create synergies.

- **Infrastructure Investment:**
  - Addressing Zambia's infrastructural challenges, such as road networks and internet coverage, is vital for long-term success.