Hackathon Event: BlockChain Bangladesh 2025

Theme: Building the Trust Layer for "Smart Bangladesh"

Problem Statement Title: Operation *Shonali Ash* (Golden Fiber) – Revolutionizing the Agricultural Supply Chain

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1. The Context (Scenario)

It is **2025**. The Government of Bangladesh is aggressively pursuing its **"Smart Bangladesh 2041"** vision, aiming to transform the nation into a knowledge-based economy. However, despite record yields in rice, potatoes, and onions this year, the agricultural sector faces a critical paradox: **farmers are losing money while urban consumers pay record-high prices.**

Recent reports highlight that intermediaries (*forias*, *arothdars*, and millers) are inflating prices by up to **200%** between the farm gate and the retail market. Furthermore, counterfeit seeds and fertilizers are destroying harvests. The lack of a transparent, immutable record system allows these inefficiencies to persist.

2. The Challenge

Your team has **48 hours** to design and prototype a **Decentralized Agricultural Supply Chain Network** on a blockchain (e.g., Ethereum, Polygon, Hyperledger, or a custom L2).

Your solution must address:

- **Identity & Ownership:** Verified digital identity for farmers linked to land assets.
- **Traceability:** Record the journey of produce (e.g., jute) from field to market.
- **Fair Payments:** Smart Contracts ensuring farmers receive a fair share of the final retail price.
- **Anti-Hoarding:** Features to flag batches sitting in warehouses too long via timestamping.

3. Key Functional Requirements (MVP)

- **User Roles:** Interfaces for Farmers, Transporters, Wholesalers, and Retailers.
- **Smart Contracts:**

    - *Minting Function:* To represent a harvest batch as a Tokenized Asset/NFT.
    - *Escrow Function:* To hold funds until delivery is verified.
- **SMS/USSD Bridge (Bonus):** Conceptual integration for farmers without smartphones to trigger transactions.

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4. Constraints & Tech Stack

Feature	Requirement
Time Limit	48 Hours
Platform	Any (Solidity/Rust/Move based)
Data	Mock data realistic to BD geography (e.g., Bogura, Munshiganj)
Team Size	3–5 Members

5. Judging Criteria

- **Social Impact (30%):** Efficiency in solving the "middleman problem."
- **Technical Complexity (25%):** Quality of Smart Contracts and security.
- **Feasibility (20%):** Realism for Bangladesh's current infrastructure.
- **Innovation (15%):** Creative use of Tokenomics or IoT.
- **UI/UX (10%):** Accessibility and Bangla language support.

Resources & Rewards

- **Support:** Mock APIs for "Krishi Bank" and "Surokkha"; Mentors from the BCC.
- **Winner:** BDT 5,00,000 + Pilot opportunity with the Dept. of Agricultural Extension.
- **Runner Up:** BDT 2,00,000.
- **Best Smart Contract:** BDT 1,00,000.

"Code for the harvest. Secure the future."
