AI Opportunity MVP
Computer Vision for Silage Quality Grading

Building Trust & Premium Value for Gangpur Silage

The Problem: The 'Trust Gap'

X

X

X

No Quality Verification

Farmers buy on faith. Quality is invisible inside the bag.

Commodity Pricing

Cannot command premium price without proof. Competing on price alone.
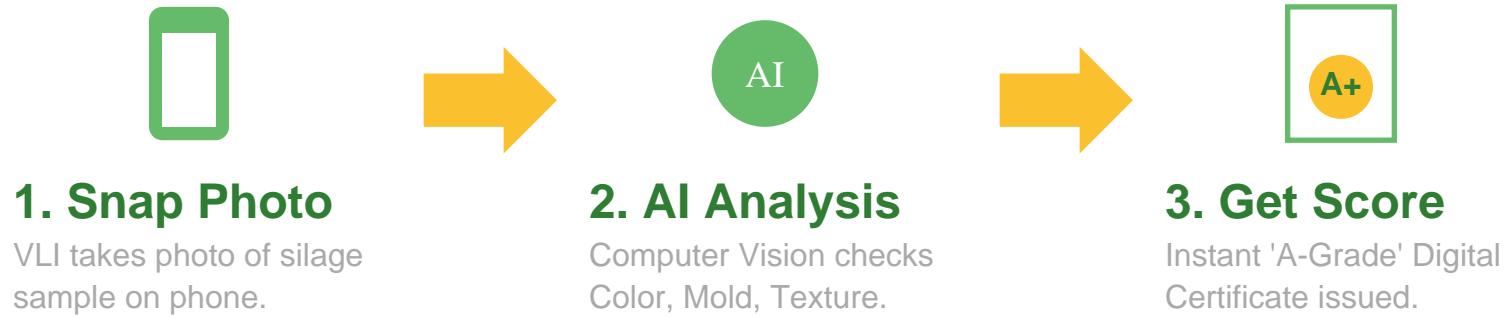
Slow Adoption

High barrier to convincing new farmers to switch feed.
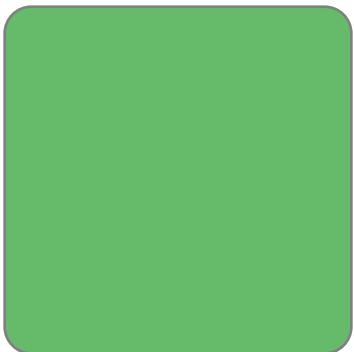
Pain Point: 'Invisible Quality' prevents market scaling.

The Solution: Digital Quality Certificate

A frictionless, mobile-based workflow to establish immediate trust.

1. Snap Photo
VLI takes photo of silage sample on phone.

2. AI Analysis
Computer Vision checks Color, Mold, Texture.

3. Get Score
Instant 'A-Grade' Digital Certificate issued.
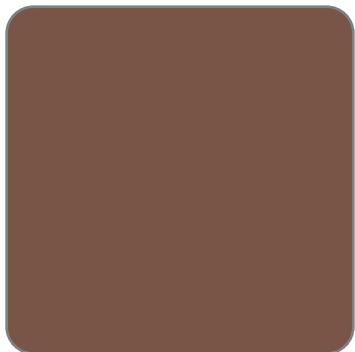
What the AI 'Sees' (Grading Criteria)

A-GRADE: Ideal

Yellow/Green, Nice Smell

Optimal Fermentation. High nutritional value.

B-GRADE: Poor

Dark Brown (Overheated)

Heat damage due to air leak. Lower nutrition.
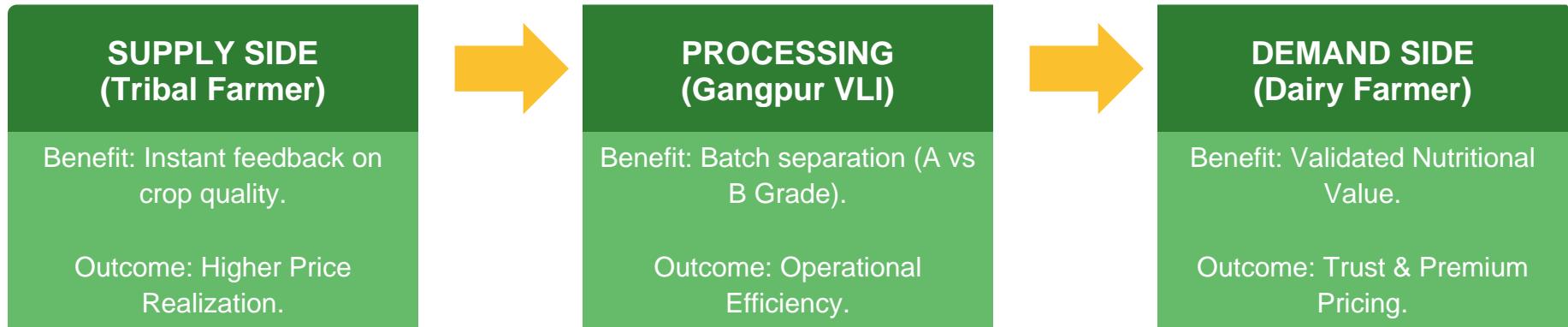
REJECT: Spoilage

Visible Mold Patches

Health risk to animals. Immediate discard.

Value Chain Impact: Bi-Directional Benefit

**SUPPLY SIDE
(Tribal Farmer)**

Benefit: Instant feedback on crop quality.

Outcome: Higher Price Realization.

→

**PROCESSING
(Gangpur VLI)**

Benefit: Batch separation (A vs B Grade).

Outcome: Operational Efficiency.

→

**DEMAND SIDE
(Dairy Farmer)**

Benefit: Validated Nutritional Value.

Outcome: Trust & Premium Pricing.

Bottom Line: Moving from Commodity to Premium Brand.

Roadmap: Q1 Execution Plan

STEP 1: Protocol	STEP 2: Collection	STEP 3: Training	STEP 4: Pilot Launch
Define photo guidelines & grading rubric.	Capture 1,000+ labeled images in field.	Train basic CNN model (MobileNet).	Deploy beta app to 5 VLIs for testing.
Owner: Project Lead	Owner: Field Team	Owner: AI Lead	Owner: Ops Team

IMMEDIATE NEXT STEP: Launch Data Collection Protocol.