HARVAAN

Soil + Profit Intelligence for Smallholder Farmers

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EXECUTIVE SUMMARY

The Opportunity

Harvaan is a **soil + profit-intelligence B2B SaaS platform** that transforms smallholder farming through precision decision-making and direct market access. We serve two sides of a broken supply chain:

For Farmers: Soil-fit crop recommendations, profit planning tools, risk analysis, and WhatsApp-delivered playbooks—replacing guesswork with forecasted profitability ranges.

For Enterprise Buyers: A dashboard of verified, contract-ready growers with supply forecasts and streamlined contracting workflows—replacing costly intermediaries with direct, transparent sourcing.

The Problem

Scale: ~570 million smallholder farmers globally face persistent challenges. In India, 89.4% of agricultural households own <2 hectares, making downside risk catastrophic.

Farmer Pain: Switching to higher-profit crops risks financial ruin if yields or prices disappoint. Result: farmers stay in low-margin crops and accept volatile spot prices.

Buyer Pain: Fragmented smallholder supply, limited farmer-level visibility, high contracting costs, and inconsistent quality drive reliance on costly middlemen.

System Failure: Both sides underinvest due to opaque risk + weak market access.

Our Solution

Harvaan replaces the "guesswork + fear" with three integrated capabilities:

Harvaan Grower (SaaS for Farmers)	Harvaan Enterprise (SaaS for Buyers)
Soil-fit scoring + crop recommendations	Regional "top growers" discovery dashboard
Whole-farm profit planner (inputs, yields, prices)	Verified farm profiles + forecasts
Risk meter + key volatility drivers	Supply forecasts by crop/region
WhatsApp playbooks in local language	Contact/request/contract workflow
Farm record vault (practices + results)	Buyer retention via accuracy + efficiency

Table 1: Harvaan's Dual-Platform Value Proposition

Market & Strategy

Beachhead: Andhra Pradesh smallholder clusters via FPOs/co-ops (direct team access, high smallholder density).

Expansion: Dense cluster onboarding + buyer category expansion (essential oils, spices, extracts, food/CPG).

Competitive Edge:

- **Two-sided network:** verified grower profiles + enterprise discovery
- **Profit planning** (not just agronomic numbers)
- **WhatsApp-native execution + outcome feedback loop** (data moat)

Financial Snapshot

Year	1	2	3	4	5
Revenue	$28K	$161K	$655K	$2.22M	$5.25M
Farmers	500	2,500	5,000	25,000	100,000+
Buyers	2	5	8	25	60+

Table 2: 5-Year Financial Projection (Illustrative)

Gross Margins: Target 75–85% SaaS benchmarks as onboarding scales and automation increases.

COMPANY OVERVIEW

Single-Sentence Definition:
Harvaan is a B2B soil + profit-intelligence SaaS that turns smallholder farms into contract-ready supply and gives enterprise buyers verified sourcing and contracting tools.

Value Chain & Process Flow

PROBLEM STATEMENT

Target Customers & Unmet Needs

Segment	Who	Unmet Need / Pain	Today's Workaround
A) End-Users	Smallholder farmers + FPOs/co-ops	High downside risk in crop switching; limited	Stick to familiar crops; informal advice; accept spot prices

		profit forecasting; weak buyer access	
B) Economic Buyers	Essential oils, spice, extract, food companies	Unreliable supply; limited farmer visibility; costly contracting; inconsistent quality	Layers of intermediaries; minimal farmer data; expensive field efforts

Table 3: Two-Sided Market: Customer Segments & Unmet Needs

The Problem Loop

1. **Farmers avoid switching** because one bad harvest can wipe out gains → they stay in lower-margin crops and accept price volatility

2. **Buyers can't reliably contract** smallholders due to low transparency + high monitoring cost → they default to middlemen and still face risk

3. **Result:** Fragmented supply, underinvestment, and persistent income instability

Social & Environmental Issue (With Evidence)

· **Global scale:** ~570 million smallholder farmers; 500+ million face limited access to finance, inputs, markets (World Economic Forum)

· **India specificity:** 89.4% of agricultural households own <2 hectares (NSS Situation Assessment Survey); ~85% of operational holdings <2 hectares (Agriculture Census)

· **Impact:** Persistent income volatility, distress selling, inability to adopt higher-value crops

· **System failure:** Economic (underinvestment), Operational (fragmented advice + low trust), Resilience (concentrated farmer risk)

SOLUTION & PRODUCT

Exact Function & Customer Value

Customer	Exact Function	Why It Matters
Farmers / FPOs	Quantified crop profitability + execution guidance (soil-fit → profit plan → risk meter → playbook) + farm record vault for market access	Reduces downside risk; improves expected profit; converts "trust" into verified evidence for better buyer terms

Enterprise Buyers	Verified grower sourcing + forecasts + low-friction contracting (discovery → profiles → forecasts → contract workflow)	Cuts sourcing/monitoring costs; improves supply predictability; reduces contracting friction

Table 4: Core Functions & Value Delivery

What It Displaces (Competitive Positioning)

Current Solution	What's Missing	Harvaan Replaces With
"Numbers-only" soil tests	No profit/risk answers	Soil-fit + profit planning + risk drivers + playbooks
Fragmented advisory support	Inconsistent, unmeasurable, hard to follow	Local-language playbooks + recorded practices/outcomes
Opaque middlemen sourcing	Limited visibility; costly; inconsistent quality	Verified profiles + forecasts + direct contracting rails

Systemic Root Causes Addressed

✓ **Profitability & risk unclear** → Made legible via forecast ranges + volatility drivers
✓ **Weak market access** → Created via verified profiles + buyer discovery tools
✓ **Dependence on opaque intermediaries** → Reduced via direct contracting pathways

Proprietary Assets

1. **ML Soil + Crop-Fit Engine:** Calibrated on pilot-region data; continuous learning from outcomes

2. **Contract-Ready Farm Profile Scoring:** Reliability score driven by practice adherence + yield/quality consistency over time

MARKET & COMPETITION

Market Opportunity
Macro Trends:

· Growing supply chain pressure for traceability & reliable sourcing

· Rising climate variability + price volatility driving need for risk-aware planning

· Rapid smartphone + WhatsApp adoption enabling low-cost digital tools

Target Segment (Beachhead):
Andhra Pradesh smallholder clusters via FPOs/co-ops (direct team access, high smallholder density, rapid learning cycle).

TAM Framing:

· **Grower SaaS TAM:** Hundreds of millions of smallholder farms globally

· **Enterprise TAM:** Essential oils, spices, extracts, food/CPG procurement (large, growing sectors)

5-Year Penetration & Market Share (Illustrative):

· Assume "digital decision/support tooling penetration" grows meaningfully as smartphone + messaging adoption and aggregator distribution scales

· Year 1: pilot clusters only

· Year 3: visible adoption in select FPOs/districts

· Year 5: broader adoption across multiple states via institutional channels

Competition

Dimension	OneSoil / Monitoring Tools	Soil Test Pro / Sampling	Harvaan
Core output	Crop monitoring / NDVI / zones	Soil sampling + lab workflow	Soil-fit + profit plan + risk
Buyer focus	Farmers / ag advisors	Farmers / precision ag	Farmers + Enterprise buyers
Contracting rails	No	No	**Yes** (discovery → contract)
Verification layer	Limited	Lab results only	Farm profile + adherence/outcomes

Table 5: Competitive Comparison: Key Differentiation Points

Sustainable Competitive Differentiation:

1. Two-sided network with verified profiles + enterprise discovery

2. Profit planning (not just agronomic numbers)

3. WhatsApp-native execution layer + outcome feedback loop (data moat)

BUSINESS MODEL

Mission as Foundational to Venture

Harvaan's revenue scales only when farmers and buyers complete profitable, reliable contracting cycles—**impact is inseparable from growth.**

Model Type: Integrated. The core product directly improves smallholder income predictability and market access while generating subscription revenue.

Revenue Model & Pricing

Stream	Customer	Pricing
Grower SaaS subscription	Farmers / FPOs (per season)	$10–$25/farmer/season (or B2B FPO bundle)
Enterprise annual fee	Buyers	$5K–$25K/year (early stage)
Success fee (optional)	Buyers	0.5–2% of contracted GMV (pilot: 1%)

Table 6: Revenue Streams & Pricing Strategy

Position in Value Chain

Harvaan sits between farm decision + execution and enterprise procurement, acting as a **data + contracting layer** that reduces friction for both sides.

Financial Sustainability & Scalability

· **Scales via software margins** + cluster-based onboarding; network effects improve buyer value as verified profiles grow

· **Target gross margins:** 75–85% SaaS benchmark as onboarding/verification automates

· **Break-even:** Illustrative model reaches OPEX break-even around Year 4 as buyer count and farmer scale reduce per-user support burden

POPULATION SERVED & GEOGRAPHIC FOCUS

Population Description

Primary: Small and marginal farmers (often <2 hectares) who face disproportionate downside risk and limited bargaining power. In India, small/marginal farmers comprise the majority of agricultural households.

Secondary: Enterprise buyers (essential oils, spices, food processors) seeking predictable, verified, ethically sourced supply.

Underserved & Environmental Priority

· Smallholder agriculture underpins global food systems at massive scale with persistent income instability

- Limited access to finance, insurance, inputs, and market access amplifies vulnerability
- Risk concentration on farmer encourages risk-aversion and discourages adoption of higher-profit crops
- Environmental benefit: improved crop choice + reduced distress selling supports sustainable land use

Geographic Connection & Experience

Andhra Pradesh beachhead: Founding team has direct connection via founder's uncle's farm, enabling trust-based onboarding and rapid iteration.

MARKETING & SALES STRATEGY

Distribution Channels

- **FPOs/Co-ops/NGOs:** B2B bundles with institutional partners
- **Local ag retailers:** Onboarding support + kit logistics
- **Direct WhatsApp clusters:** Farmer-to-farmer outreach + group onboarding

Segmentation, Targeting, Positioning (STP)

Segmentation: Smallholders by crop type, irrigation access, proximity to buyers; buyers by category (essential oils/spices/food processing)

Targeting: Initial clusters in Andhra Pradesh with clear high-value crop adjacency + reachable buyers

Positioning: *"Contract-Ready Farm Intelligence: Profit Planning + Verification + Contracting"*

Market Entry & "Front Bowling Pin" Strategy

Rollout Phase 1 (Pilot):

- 1 anchor cluster (uncle's farm)
- 20–40 nearby farmers
- FPO/co-op or tight geographic cluster for density

Rollout Phase 2 (Scale):

- Expand to adjacent clusters in neighboring districts
- Replicate state-wide through FPO partnerships
- Add buyer categories (essential oils → spices → extracts)

Promotional Strategy

Objective	Tactics

Awareness / Users	Farmer champions + field coordinator + WhatsApp groups
Buyer Leads	Outbound to procurement teams with "verified cluster supply snapshots"
Repeat / Referrals	Incentives for farmer/FPO referrals; buyer retention via forecast accuracy + efficiency

COMPANY STATUS & OPERATIONS

Launch & Development Status

✓ **Built:** Proprietary soil-fit + profit-planning engine; farmer data system (MVP-ready)
✓ **Status:** Pilot-stage; enterprise contracting workflow in MVP form
✓ **Entity/Capital:** [To be completed with current legal status]

Company-Building Timeline & Milestones

Accomplished to Date:

· MVP engine built (soil/crop fit + profit planning)

· Pilot region + anchor farm secured

Next 12–18 Months (With Seed Funding):

· 3–5 clusters onboarded (200–500 farmers)

· 3–10 enterprise buyers onboarded

· Contract workflow + verification scoring hardened

· Measurable impact demonstrated (income uplift, adoption, buyer satisfaction)

Product & Operations Roadmap

V1 (Months 1–6): Grower + Enterprise dashboards, verification scoring, contracting templates, WhatsApp playbook delivery

V2 (Months 6–12): E-sign + milestone tracking, automated supply forecasting, API exports

Logistics: Software-only foundation; partner with local retailers for any input kits needed in future phases

TEAM

Roles

Role	Name	Focus
Tech / ML	Kalp Shah	Soil intelligence, data systems

Ops / GTM	Prabhath Inturi	Field operations, buyer outreach

Planned Part-Time Hires (with seed): Buyer-relations specialist, field-outreach coordinator

Board & Advisory

· **Board:** [TBD at pilot stage]

· **Advisory (Planned):** Agronomist advisor, procurement/commodity advisor, local FPO leader

FINANCIALS & ECONOMIC VIABILITY

5-Year Pro Forma Summary

Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Farmers onboarded	500	2,500	5,000	25,000	100,000+
Enterprise buyers	2	5	8	25	60+
Total Revenue	$28K	$161K	$655K	$2.22 M	$5.25M

Table 7: Illustrative 5-Year Financials

Revenue Driver Assumptions:

· Grower SaaS: $15/farmer/season

· Enterprise SaaS: $10K/buyer/year

· Success fee: 1% of contracted GMV

Capital Requirements & Uses

Seed Ask: $15,000

Allocation:

· Pilot onboarding + verification costs (40%)

· MVP dashboard polish (25%)

· Materials + local-language playbooks (20%)

· Part-time hires: buyer-relations + field-outreach (15%)

Margin Analysis & Break-Even

· **Gross margins at maturity:** 75–85% (SaaS benchmark; Stripe)

· **Break-even:** Illustrative model reaches operating break-even ~Year 4 as scale improves unit economics

· **Operating leverage:** Early years heavy on product + field ops; decreases as systems standardize

Investability Conditions

Harvaan is viable if it achieves:

1. Dense farmer onboarding through B2B channels (FPO/co-op)

2. Enterprise willingness to pay for verified sourcing + contracting efficiency

3. Forecast accuracy + verification trust sufficient to drive repeat contracting cycles

RISKS & MITIGATION

Category	Risk	Mitigation Strategy
Market	Farmers don't adopt / low willingness to pay	Sell via FPOs (B2B bundles); WhatsApp-native; prove ROI in pilot
Market	Buyers don't convert to paid users	Low-friction pilots; show verified cluster snapshots + time/cost savings
Product/Tech	Forecast inaccuracy undermines credibility	Use ranges + confidence scores; continuous outcome learning; conservative recommendations
Product/Tech	Verification trust gap	Lightweight verification + adherence logs; partner with local agronomists/FPOs
Financial	Unit economics don't scale	Standardize onboarding; automate support; target gross margin benchmarks
Management	Execution bandwidth limited	Hire field + buyer-relations part-time early; define clear OKRs + timelines

IMPACT ASSESSMENT

Theory of Change

If smallholder farmers receive soil-fit + profit/risk planning and are made visible to buyers via verified profiles and contracting workflows, then they will switch into higher-value crops and/or sell under better terms, increasing income stability and reducing distress-selling dynamics.

Outputs, Outcomes & Metrics

Outputs (Activity Metrics): Farmers onboarded, Verified profiles created, Playbooks delivered (WhatsApp), Buyer leads, # contracting requests, and # contracts executed

Outcomes (Impact Metrics): Farmer income uplift vs. baseline (per season), Income variance reduction (volatility), % Farmers successfully switching crops, and Buyer-side: sourcing cycle time reduction; fulfillment reliability

Measurement Plan (Ethical, Culturally Appropriate)

· **Baseline:** Survey + existing farm records (inputs, yields, selling prices)

· **Ongoing data capture:** Local language; opt-in consent; clear data-use explanation

· **Comparison:** Pilot farmers vs. matched local controls (where feasible)

· **Reporting:** Aggregate outcomes; individual privacy protected; results shared with community partners

Ecosystem Map: How Harvaan
Fits Within Existing Agricultural Efforts

Past & Present Efforts That Informed Harvaan

Soil Testing & Precision Ag Tooling

Sampling, NDVI monitoring, VRA mapping

⚠ **Lesson Learned:** "Numbers-only" tools don't fully trigger behavior change when downside risk remains unaddressed.

Digital Advisory/Extension Programs

WhatsApp-based farmer learning networks

Lesson Learned: Low-cost messaging channels can deliver adoption and ongoing support efficiently

Contract Farming via Intermediaries

Offline contracting
Farmer-buyer links

Lesson Learned: Lack of farmer level visibility and verification creates ongoing quality/supply risk

Fragmented Solutions

- Soil test results deliver agronomy but not profit planning or buyer access
- WhatsApp-based extension helps with advisory but lacks verification or contracting rails
- Offline contract farming enables some transactions but perpetuates opacity + intermediary costs

HARVAAN
Profit Planning
Farmer Verification
Buyer Discovery & Digital Contracting

Closes the gap between insight, action, and market access.

Agronomy Data | Advisory & Learning | Contracting & Markets | Verification & Trust