



BUSINESS PLAN · INDIA

Agri-Drone Spraying Service

On-hire drone spraying, seeding & crop mapping — faster, safer, precise; SMAM/Namo-Drone-Didi supported

AGRI-TECH

AISEVAK.IN · BY ABL DIGITAL TECHNOLOGIES

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This document is confidential and prepared for planning purposes. All financial figures are illustrative model assumptions for an Indian MSME context and must be validated against live quotes, local rates and professional advice before any investment or borrowing decision.

1. Executive Summary

This plan sets out an **Agri-Drone Spraying Service** in India — a business that owns agricultural drones and offers on-hire drone-based spraying (pesticides, fertilisers, micronutrients), seeding, and crop-mapping/monitoring to farmers, FPOs and estates on a per-acre basis. It earns spraying/service fees, delivering faster, safer, more precise and input-efficient crop application than manual spraying, and benefits from strong government promotion (SMAM/'Namo Drone Didi'/drone subsidies).

Drone spraying is an emerging, high-growth agri-service — it cuts spraying time and labour dramatically, reduces chemical & water use, improves coverage, and protects farmers from pesticide exposure. With DGCA-enabled kisan drones, government subsidies, and rising labour scarcity, demand is accelerating. A well-run drone-service operator with skilled pilots, reliable equipment and dense catchment coverage earns strong per-acre margins in peak seasons.

The promoter — an agri-tech entrepreneur / trained drone pilot / FPO — seeks total funding of **₹22 lakh** (₹6 lakh promoter + ₹16 lakh, with **SMAM/agri-drone subsidy (up to 40-75%)** and NABARD/Mudra finance), targeting **₹26 lakh** revenue in Year 1 and **₹58 lakh** by Year 3. (*High-subsidy, asset-light-per-acre, utilisation-driven service model.*)

2. Business Description, Vision & Legal Structure

Concept: A drone-spraying service that sprays crops faster, safer and more precisely than manual labour — on affordable per-acre hire.

Vision: To be the leading agri-drone service raising spraying efficiency & farmer safety in the catchment.

Mission: Provide reliable, precise, safe drone spraying & mapping — saving farmers time, input cost and health risk.

Legal structure options

- **Proprietorship / LLP** — LLP recommended as the fleet grows.
- **FPO / Pvt Ltd** — FPO-run drone services get strong scheme support; Pvt Ltd for scaling.

Regulatory anchor: agri-drone services are governed by **DGCA Drone Rules (Digital Sky, drone registration, Remote Pilot Certificate)**, **pesticide-spraying SOPs (CIB&RC)**, and **insurance**. Strongly promoted via **SMAM drone subsidy**, **'Namo Drone Didi'**, and **Kisan Drone** schemes (40-75% support). Utilisation across seasons, pilot skill, equipment reliability & safety, and catchment density determine profitability.

3. Promoter & Ownership

Led by a promoter with agri, drone or tech experience (with/employing DGCA-certified remote pilots). Delivery uses trained drone pilots, a technician for maintenance/battery management, and a booking coordinator. Year-one ownership rests with the promoter/entity; ownership and profit-sharing are editable inputs.

4. Market Analysis — India

Agri-drone adoption is rising fast in India, driven by labour scarcity & cost, the need for precise, safe & efficient spraying, input savings, and strong government promotion (subsidies, drone-pilot training, FPO/CHC drones). Demand is seasonal (spraying windows) and local, favouring operators with reliable equipment, trained pilots, and dense catchment coverage across crops.

Demand drivers

- **Labour scarcity & rising** spraying wages.
- **Speed, precision & input savings.**
- **Farmer-safety** (no chemical exposure).
- **Strong subsidy & scheme** push.
- **Larger farms, estates & FPOs.**

Market sizing (illustrative framing)

Layer	Definition	Indicative scale
TAM	Crop-spraying service demand in India	Very large
SAM	Sprayable acreage in the operator's catchment	Substantial
SOM (Yr 1-3)	Acres sprayed / year	Utilisation-linked

Target segments

- Medium & large farmers.
- FPOs & farmer groups.
- Estates & plantations.
- Input companies & contract spraying.

5. Competition & Competitive Advantage

Landscape: manual spraying labour, other drone operators, input-company drone programs, and app-based drone platforms. The firm competes on reliability, coverage speed, pilot skill, pricing and safety.

The firm's edge

- **Reliable equipment & trained pilots.**
- **Coverage speed & precision.**
- **Subsidy-enabled** competitive pricing.
- **Safety & input savings** for farmers.
- **Catchment density & booking** system.

6. Services & Pricing

Service	Model	Indicative rate
Pesticide/fertiliser spraying	Per acre	₹300-500/acre
Micronutrient / foliar spray	Per acre	Per acre
Seed / granule broadcasting	Per acre	Per acre
Crop mapping / monitoring	Per acre / scan	Add-on
Contract spraying (input cos/estates)	Bulk / retainer	Negotiated

Revenue = acres sprayed × per-acre rate; a drone can cover many acres/day in peak windows. Utilisation across the season (spraying peaks) and pilot productivity are the decisive economic levers; contract spraying adds steady volume.

7. Go-to-Market — Marketing & Sales

- **Farmer & village** demos and word of mouth.
- **FPO & estate** contracts for volume.
- **Input-company & dealer** tie-ups (contract spraying).
- **Advance booking** for spraying windows.
- **Subsidy & scheme** linkage (farmer awareness).

Sales approach

Demonstrate speed, precision & savings → capture peak-season spraying at high utilisation → secure FPO/estate/input-company contracts → expand fleet & catchment. Utilisation and reliability drive repeat demand and returns.

8. Operations Plan

- **Base:** an operating base with drone storage, battery charging & maintenance; mobile deployment across the catchment.
- **Process:** booking & scheduling → deploy drone + pilot → spraying operation (mix, calibrate, spray) → billing → battery/maintenance turnaround.
- **Fleet:** agri-spraying drones, spare batteries, charging (generator/solar), mixing & safety kit.
- **Compliance & safety:** DGCA registration & pilot certification, pesticide SOPs, insurance, safe handling.
- **Capacity:** acres/day per drone across seasons; scale by adding drones, pilots & batteries.

Spraying workflow

Stage	Activity	Metric
Book	Schedule	Bookings
Deploy	Drone + pilot	Utilisation
Spray	Field operation	Acres/day
Bill	Collect	Realisation
Maintain	Battery/upkeep	Uptime

9. Regulatory, Licences & Compliance (India)

- **DGCA Drone Rules:** drone registration (Digital Sky/UIN), Remote Pilot Certificate (pilot training), operating-zone compliance.
- **Pesticide-spraying SOPs:** CIB&RC drone-spraying guidelines; approved chemicals/dosage; safe handling.
- **Scheme & subsidy:** SMAM/'Namo Drone Didi'/Kisan Drone subsidy application & documentation.
- **Business, insurance & tax:** proprietorship/LLP/FPO/Pvt Ltd; drone & liability insurance; PAN/TAN; GST (services); Udyam (MSME).

10. Organisation & Manpower Plan

Role	Yr 1	Yr 2	Yr 3
Promoter / Manager	1	1	1
Drone pilots (DGCA-certified)	2	4	6
Technician / battery & maintenance	1	2	3
Booking & admin	1	2	2
Total	5	9	12

11. Implementation Timeline & Milestones

Phase	Timeline	Milestone
Setup	Month 0-3	Drones, DGCA registration, pilot certification, SMAM sanction
Launch	Month 3-4	First spraying season; demos & bookings
Traction	Month 4-10	Utilisation ramp; FPO/estate contracts; break-even nears
Scale	Year 2	Add drones/pilots; input-company contracts
Growth	Year 3	High utilisation; expanded fleet & services

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions for an Indian context, shown so the promoter can replace them with live rates. They are not projections of guaranteed results. High-subsidy, utilisation-driven service model.

12.1 Project cost & means of finance

Capital requirement	₹
Agri-spraying drones (2) & batteries	14,00,000
Charging (generator/solar) & kit	3,00,000
Pilot training, DGCA & insurance	2,00,000
Vehicle, branding & setup	2,00,000
Working-capital buffer	1,00,000
Total project cost	22,00,000
Promoter contribution	6,00,000
SMAM/drone subsidy + NABARD/Mudra loan	16,00,000

Note: SMAM/agri-drone subsidy (40-75%, higher for FPOs/SC-ST/women under 'Namo Drone Didi') can fund a large share of drone cost, sharply reducing the effective loan & improving returns; the split is indicative and depends on the sanctioned subsidy.

12.2 Projected Profit & Loss (3 years)

Particulars	Year 1	Year 2	Year 3
Spraying services	22,00,000	38,00,000	48,00,000
Mapping, seeding & contracts	4,00,000	8,00,000	10,00,000
Total revenue	26,00,000	46,00,000	58,00,000
Pilot & staff wages	8,40,000	13,20,000	17,00,000
Power, batteries & consumables	4,50,000	7,50,000	9,50,000
Maintenance, spares & insurance	3,50,000	5,50,000	7,00,000
Travel, overheads & admin	3,20,000	4,80,000	6,00,000
Interest on loan	1,10,000	85,000	55,000
Total expenses	20,70,000	31,85,000	40,05,000
Net profit (before tax)	5,30,000	14,15,000	17,95,000
Net margin	20.4%	30.8%	30.9%

12.3 Unit economics & break-even

- **Per acre:** rate – (power/battery + chemical-mix labour + pilot + drone depreciation); volume in peak windows drives return.
- **Utilisation & acres/day** are the biggest levers; battery turnaround & uptime matter.
- **Break-even:** reached around month 6-9 after the first spraying season; subsidy sharply improves viability.

12.4 Projected Cash Flow — Year 1 (quarterly, illustrative)

Particulars (₹)	Q1	Q2	Q3	Q4
Opening balance	1,00,000	1,10,000	1,55,000	2,20,000
Collections	7,00,000	5,00,000	8,00,000	6,00,000
Operating outflows	6,60,000	4,25,000	7,05,000	5,20,000
Loan EMI	30,000	30,000	30,000	30,000
Closing balance	1,10,000	1,55,000	2,20,000	2,70,000

Revenue peaks in spraying windows; between peaks, drones idle. Multi-crop catchment, mapping/seeding services and input-company contracts smooth utilisation; the buffer bridges lean periods.

12.5 Key Performance Indicators to Monitor

- **Utilisation:** acres sprayed/day; utilisation %; peak-season capture.
- **Revenue:** realisation per acre; contract share.
- **Ops:** uptime %; battery cycles; safety incidents (zero target).
- **Demand:** bookings; FPO/estate/input-company contracts; repeat.

13. Funding Requirement & Bankability

Total ask: **₹16 lakh (subsidy + loan)** against ₹6 lakh promoter contribution — anchored by **SMAM/agri-drone subsidy (40-75%)** with NABARD/Mudra term finance, coverable under CGTMSE. The subsidy sharply improves viability; Year-1 net profit ~₹5.3 lakh against modest debt service gives a comfortable DSCR — highly bankable as a scheme-backed, high-demand service asset.

13.1 Funding utilisation

Use of funds	₹	% of total
Drones & batteries	14,00,000	64%
Charging & kit	3,00,000	14%
Pilot training, DGCA & insurance	2,00,000	9%
Vehicle, branding & setup	2,00,000	9%
Working-capital buffer	1,00,000	4%
Total	22,00,000	100%

14. Risk Analysis & Mitigation

Risk	Mitigation
Low/seasonal utilisation	Multi-crop catchment; mapping/seeding; input-company & FPO contracts
Equipment failure / downtime	Maintenance; spare batteries/drone; technician; warranty
Pilot availability / skill	DGCA training; multiple pilots; SOPs
Safety / regulatory	DGCA & CIB&RC compliance; insurance; safe handling
Technology / price change	Utilisation focus; service diversification; subsidy access

15. SWOT Analysis

Strengths High subsidy support; fast-growing demand; strong per-acre margins; safety & efficiency value.	Weaknesses Seasonal utilisation; equipment & pilot dependent; battery/downtime; tech-evolving.
Opportunities Drone-scheme push; FPO/estate & input-company contracts; mapping/seeding; fleet scale.	Threats Manual-spray price competition; new operators; regulation; tech obsolescence.

16. Recommended AiSevak Tools for This Business

This agri-drone service would use AiSevak's Agri-Tech vertical tools in delivery:

- **Service ops:** booking/scheduling, acres-sprayed/utilisation-tracking, billing and maintenance-log tools.

- **Compliance & schemes:** DGCA/Digital-Sky, SMAM/'Namo Drone Didi'-subsidy and GST tools (with Finance & Legal verticals).
- **Practice:** Business Plan, per-acre & per-drone costing and Break-even tools to model utilisation.

17. Key Assumptions & Notes

- Asset-light-per-acre service; SMAM/agri-drone subsidy (40-75%) assumed — sharply improves viability.
- Utilisation ramps across spraying seasons; acres/day & peak-window capture drive returns.
- Loan interest ~10% p.a.; DGCA registration, RPC pilot certification & insurance assumed; GST on services.
- Utilisation, uptime, pilot skill, safety and subsidy access are decisive; figures exclude GST.

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No signup needed to explore; each tool guides you step by step.

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