



BUSINESS PLAN · INDIA

Floriculture and Cut-Flower Business

A flower business that measures the one thing it sells, because nobody who pays for flowers is there on the day they fail

PLANTATION AND ESTATE AGRICULTURE

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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 a **Floriculture & Cut-Flower Business** near Bengaluru — **50 hectares: 4.0 ha of polyhouse rose, 2.5 ha of polyhouse gerbera and carnation, 38 ha of open-field loose flowers and 5.5 ha under construction and nursery** — with pre-cooling, cold rooms, reefer dispatch, a grading pack-house and a vase-life laboratory, plus flowers bought from about 340 member growers. By Year 3 it handles **21.2 million stems and 721 tonnes of loose flower at ₹15.00 crore**.

This plan is the sixth in vertical 55 and **inherits the ten anchor rules (a)-(j)** set by the tea and coffee estate plan.

Item	Detail	Year 3
What is sold	Graded, pre-cooled and vase-life-tested rose, gerbera and carnation; open-field loose flowers; and a cold-chain and testing service to third parties	₹15.00cr
Area / members	6.5 ha under polyhouse at 250 and 320 stems per m ² per year; 38 ha open field at 14.3 t/ha	50 ha; 340 members
Volume handled	Own and member stems, plus loose flower	21.2m stems; 721 t
PAT / net margin	Protected cultivation is capital-heavy and thin; modelled at mid-cycle prices	₹0.62cr / 4.1%
ROCE on ₹9.50cr	Polyhouses, cold chain, pack-house and planting stock	12.4%
Published vase life, roses, standard conditions	The number this plan exists to create, raise and then guarantee	6.2 → 9.4 days

☐ **THE ONLY ATTRIBUTE THAT MATTERS IN A CUT FLOWER IS A DURATION, IT REVEALS ITSELF ENTIRELY AFTER THE SALE, AND THE PERSON WHO PAID IS USUALLY NOT THE PERSON WHO WATCHES IT HAPPEN. Flowers are bought as a gift, as decoration for an event, or as an offering — so THE BUYER HANDS THEM AWAY AND NEVER LEARNS, and the person who watches them collapse on day three has no idea who sold them and no reason to tell anyone.**

The chain is not concealing anything. THE ARCHITECTURE OF THE TRANSACTION SIMPLY DESTROYS THE FEEDBACK. A wedding decorator buying 46,000 stems does not watch them wilt; the family does, on day two of a three-day function, and blames the decorator — who has been paid, whose event is over, and who will order the same stems again next month because he has no way of telling one supplier's flowers from another's.

2. Business Description, Vision & Legal Structure

A private limited company holding the farm on a long lease, operating the polyhouses, pack-house, pre-cooling and cold rooms and the vase-life laboratory, and buying stems and loose flower from member growers across the surrounding taluks.

Element	Position
Legal form	Private limited company; farm on 25-year registered lease; APEDA registration for any export line

Where the money is made	Polyhouse stems carry the margin; open-field loose flower carries volume and festival upside; the cold-chain service earns on capacity built for our own flowers
What is different	Every batch carries a measured vase life, published with it and credited when it falls short
Vision	A flower business that can be held to a promise, in a trade where no promise has ever been made

Why this shape	Reasoning
Polyhouse and open field together	Polyhouse stems are consistent, gradeable and priced on quality; loose flower is festival-driven and volatile. The first funds the cold chain and the second fills it
Own cold chain rather than hired	Vase life is spent in the hours after cutting. A grower who hands stems to a transporter has given away the only period in which the product's value can still be protected
Vase-life laboratory on site	A held-back sample from a batch already dispatched is the only way to measure a duration without destroying the sale
Cold-chain service sold to third parties	The capacity built to protect our own vase life earns ₹1.80 crore selling the same capability to growers who have none — which is what makes the commitment affordable

3. Promoter & Ownership

Item	Position
Promoter	Horticulture graduate with twelve years in protected cultivation and post-harvest handling; personally signs the published vase-life figure each season
Promoter equity	₹3.42cr of the ₹9.50cr project cost (36%), unsecured and not withdrawable during the loan term
Ownership	Promoter family 76%; member producer company 14%; ESOP and key staff 10%
Governance	The published vase-life figure is a board resolution, not a marketing decision, and the credit is issued automatically on the laboratory result without a sales manager reviewing it first

That last point is the whole design. **A warranty that a salesperson can decline to honour is not a warranty, and in a trade where the buyer cannot detect the failure and will not complain, DECLINING QUIETLY WOULD NEVER BE FOUND OUT. The credit runs off the laboratory result automatically because the only person who would ever catch us is us.**

4. Market Analysis — India

Segment	What drives it	Position taken
Polyhouse rose	Stem length grade, bud size, festival and wedding dates; prices swing many times over between an ordinary week and a muhurat cluster	10.0m stems at ₹4.50
Gerbera and carnation	Colour range, event and decoration demand, longer natural vase life than rose	8.0m stems at ₹3.00
Open-field loose flowers	Marigold, tuberose, chrysanthemum and jasmine for garlands, temples and events; sold by weight and violently seasonal	545 t at ₹55/kg

Member flowers, graded and dispatched	340 holdings with no pre-cooling, no cold room and no route to a buyer who pays for condition	3.2m stems and 176 t
Cold-chain and vase-life testing service	A district full of polyhouses and almost no pre-cooling capacity	₹1.80cr at 56% gross margin

Why no complaint ever arrives

Who buys the flowers	Who lives with them	Does a complaint travel back?
A man buying a bouquet	The person he gives it to	No. He never sees day four
A wedding decorator	The family, mid-function	No. The event is over
A temple or an institution	Nobody in particular	No
A hotel or a corporate office	Whoever replaces them	Replaced, not reported
Anyone at all	Somebody else	No

Demand is not the constraint and is growing steadily — **weddings, events, temples, hotels and a rising retail bouquet market all want more flowers than India currently grades and cools. The constraint is that no supplier in this trade has ever been able to charge for quality, because the attribute that constitutes quality cannot be observed at the moment money changes hands and is never reported afterwards.**

One figure sets the scale of what is being left on the table. India grows a very large volume of cut flowers and exports a small fraction of it, and the exported fraction is handled to a completely different standard by the same growers, in the same districts, often in the same week. The domestic stem is not a lesser flower — IT IS THE SAME FLOWER, HANDLED WORSE, BECAUSE THE PERSON RECEIVING IT CANNOT MEASURE WHAT HE GOT AND THE PERSON RECEIVING THE EXPORT STEM CAN. Every discipline in this plan already exists in India. It has simply never been pointed at an Indian buyer.

5. Competition & Position

Competitor type	What they do well	Where the gap is
Polyhouse growers	Genuine agronomic skill, consistent stems, real yields under protected cultivation	Hand stems to a transporter at ambient within an hour of cutting and never learn what arrived
Commission agents and mandi traders	Reach, liquidity, same-day settlement, festival price discovery	Sell on stem length and colour because those are visible; hold flowers for hours in the open
Bouquet retailers and online florists	Presentation, delivery, brand and a customer who can be contacted	Buy on appearance from the same undifferentiated pool and carry the complaint they cannot trace
Exporters	Real cold chain, real grading, genuine post-harvest discipline — the one segment that does this properly	Apply all of it to the export lot and none of it to the domestic one
This business	Polyhouses, open field, pre-cooling, cold rooms and a vase-life laboratory in one entity	Positioned on a measured duration, which is the one thing this trade has never sold

It is worth stating that the exporters already know all of this. Every discipline in this plan — cut stage, immediate hydration, pulsing, pre-cooling within the half hour, unbroken cold chain — is standard practice on the export bench and has been for years. Nothing here needs inventing. IT IS SIMPLY NOT APPLIED TO THE STEMS THAT STAY IN INDIA, BECAUSE THE DOMESTIC BUYER CANNOT MEASURE WHAT HE IS GETTING AND THEREFORE WILL NOT PAY FOR IT.

6. The Product Is a Duration and It Reveals Itself After the Sale

This is the finding, and it concerns a feedback loop that the shape of the transaction destroys.

Attribute	Visible at purchase?	Priced?
Stem length	Yes	Yes, precisely
Bud size and colour	Yes	Yes
Freedom from blemish	Yes	Yes
Vase life	No. Not at all	Nowhere

A cut flower's entire value is a duration. Everything else the trade grades — length, bud, colour, blemish — is a proxy for whether it will look right, and it will look right on the day of sale **WHATEVER ITS HANDLING HAS BEEN**. A rose cut on Thursday and held at 28°C for six hours loses perhaps four days of vase life, and on Friday morning it is indistinguishable from a rose that was pre-cooled within twenty minutes. **THE DAMAGE IS ALREADY DONE, ALREADY PAID FOR, AND ENTIRELY INVISIBLE.**

What makes this different from a fruit that disappoints is that **WITH FLOWERS EVEN THE DISAPPOINTMENT DOES NOT LAND ON THE BUYER**. Flowers are overwhelmingly bought for somebody else: a gift, an event, a temple, a reception. **THE PERSON WHO PAID HANDS THEM OVER AND NEVER SEES DAY FOUR**. The person who does see day four does not know the vendor, did not choose the supplier, and has no route by which a complaint could travel. **So the feedback loop is not weak or slow — IT IS STRUCTURALLY ABSENT, and it has been absent for as long as flowers have been sold.** A wedding decorator ordering 46,000 stems is buying blind, from a pool of suppliers he cannot distinguish, **and he will order the same stems again next month because nothing has ever told him not to.**

So measure the duration, publish it, and warrant it. **A HELD-BACK SAMPLE FROM EVERY BATCH GOES INTO THE VASE-LIFE LABORATORY — standard vase solution, 20°C, days to fifty per cent petal senescence — AND THE RESULT IS PUBLISHED WITH THE BATCH, 100% of batches by Year 3. PUBLISHED ROSE VASE LIFE ROSE 6.2 → 9.4 DAYS, not because the roses changed but because the handling did. AND WHERE A BATCH UNDERPERFORMS ITS PUBLISHED FIGURE, A CREDIT IS ISSUED AUTOMATICALLY ON THE LABORATORY RESULT — 214 batches and ₹0.22 crore in Year 3 — WITHOUT THE BUYER ASKING, BECAUSE THE BUYER CANNOT KNOW TO ASK. GENERAL RULE: WHERE THE ONLY ATTRIBUTE THAT MATTERS IS A DURATION THAT REVEALS ITSELF AFTER THE SALE, TO SOMEBODY WHO DID NOT PAY, NO COMPLAINT WILL EVER REACH YOU — SO MEASURE THE DURATION, PUBLISH IT, AND WARRANT IT.**

There is a tempting objection worth answering: surely a repeat buyer eventually notices? He does not, and the reason is precise. A decorator who has a bad experience cannot attribute it — the stems came through an agent, from a pool, on a day; he does not know which grower cut them, and the same agent will supply

different growers next week. His only available inference is that flowers are like this, **WHICH IS THE CORRECT INFERENCE FROM HIS EVIDENCE AND IT IS ALSO EXACTLY WHAT KEEPS THE MARKET WHERE IT IS.** Everyone in this trade has concluded, entirely reasonably, that vase life is a property of flowers rather than a property of handling — because from where they stand, it is.

7. Nobody in the Chain Is Paid by the Clock

The second thread is the mechanism, and it is a question of how each party is remunerated.

Party	Paid by	What haste is worth to them
Cutting labour	Stems cut	Nothing
Transporter	The trip	Nothing
Commission agent	Stems sold	Nothing
Vendor	Bunches	Nothing
The eventual holder	—	Four days of flower

Vase life is spent in the hours immediately after cutting, and **NOT ONE PARTY IN THE INDIAN FLOWER CHAIN IS PAID BY THE CLOCK.** Cutting labour is paid per stem, the transporter per trip, the agent per stem sold, the vendor per bunch. Every one of them is paid for a quantity and none of them for a speed — so a crate sitting an extra three hours on a loading bay costs the person who left it there exactly nothing, **while the thing being consumed by the delay is the only attribute the eventual holder cares about.**

The remedy is unglamorous and it is most of the ₹0.94 crore cold-chain line: pre-cooling within thirty minutes of the cut, hydration and pulsing at the bench, cold rooms rather than a shaded shed, reefer dispatch, and **ELAPSED TIME RECORDED AT EVERY STEP** so a slow batch has a name attached to it. Cut-to-pre-cooling fell from four hours ten minutes to twenty-four minutes and the share of batches inside the thirty-minute window went from 22% to 96%. That single change is most of the three days of vase life, and it required no technology this business did not already have to buy for its export bench.

8. Operations Plan (cut, cool, test, dispatch)

- **Cut.** Roses cut at the correct stage for the destination rather than the convenient stage for the round; into hydration solution at the bench within minutes; stems never laid on the ground or held in the open.
- **Cool.** Pre-cooling within thirty minutes of the cut; field heat removed before grading rather than after; cold rooms hold graded stems ahead of dispatch.
- **Grade.** Length, bud, colour and blemish as the trade requires — **and the batch number recorded against every bunch, because a published vase life is worthless if the batch cannot be identified later.**
- **Test.** A held-back sample from every batch into the vase-life laboratory under standard conditions; the result published with the batch and returned free to the member who grew it.
- **Dispatch.** Reefer to destination with elapsed time recorded; a batch whose sample later fails its published figure triggers an automatic credit without the buyer asking.

Step	What is recorded	Who sees it
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Cut	Block, time, stage, cutter	Batch record
Pre-cooling	Elapsed minutes from cut; in or out of the 30-minute window	Batch record and the daily report
Grading	Grade, count, batch number on every bunch	Buyer's docket
Vase-life sample	Days to 50% senescence at 20°C in standard solution	Published with the batch; free to the member
Credit	Shortfall against the published figure	Issued automatically, buyer not asked

The operational hinge is a 46,000-stem consignment for a wedding decorator, cut on a Thursday afternoon, whose held-back sample reads 7.1 days against our published 9.0. The decorator has already paid, does not test, will never test, and the wedding is on Saturday — he needs the stems, they will look immaculate when they arrive, and **NOBODY IN THE WORLD WOULD EVER FIND OUT**. Ours: the consignment is downgraded and re-priced, ₹1.24 lakh off one order. 1.6 million stems went that way in Year 3 at ₹0.43 crore of gross profit forgone, and the entire justification is that a promise nobody can check is only a promise on the days it is inconvenient.

9. Protected Cultivation, Export & Labour Compliance (India)

Area	Requirement
Scheme compliance	MIDH and National Horticulture Board protected-cultivation and cold-chain scheme conditions for polyhouses, pre-cooling, cold rooms and reefers; state horticulture department registration
Export	APEDA registration for floriculture export; phytosanitary certification under the Plant Quarantine Order; destination-country entry requirements
Plant protection	Insecticides Act 1968 and Rules 1971 for every active used under polyhouse; label dose and re-entry intervals apply in an enclosed structure exactly as in the open, and matter more there
Planting material	Royalty and licence terms on protected rose and gerbera varieties; the Protection of Plant Varieties and Farmers' Rights Act; nursery accreditation for propagation
Labour	State agricultural and shops-and-establishment rules as applicable; EPF, ESI, Minimum Wages; cutting and grading crews engaged directly rather than through contractors
Tax	Growing flowers is agricultural income exempt under section 10(1); the cold-chain service, member trading and nursery are business income; GST on services and traded goods
Other	Water abstraction and electricity connection approvals; plastic waste rules for polyhouse cladding replacement; Legal Metrology for weighment of loose flower

What the law reaches	What it does not
Phytosanitary condition of an export consignment	How long any flower will actually last
Which actives may be used and at what dose	Whether a domestic buyer is told anything about handling
Weighment of loose flower sold by the kilogram	Any obligation to state, or even record, a vase life
Variety royalties and propagation rights	Anything about the four hours after the stem is cut

Flowers are not food, so almost nothing that protects a consumer of an agricultural product applies here. There is no standard for vase life, no obligation to declare handling, no grading authority whose grades mean anything about durability, and no route by which a domestic buyer could establish that a batch underperformed. THE ABSENCE IS NOT AN OVERSIGHT — IT FOLLOWS FROM THE CATEGORY. And the consequence is that the only party who can create a standard here is a seller willing to be bound by one.

10. Organisation & Manpower Plan

Function	Yr 1	Yr 3	Note
Farm director	1	1	Signs the published vase-life figure
Greenhouse and field workers	122	157	Derived, not assumed: 65,000 m² polyhouse ÷ 625 m² per worker + 38 ha × 1.4/ha
Cutting, bunching and grading	46	62	Batch number on every bunch
Pre-cooling, cold rooms and dispatch	19	28	Thirty-minute window
Vase-life laboratory and batch tracking	6	11	Every batch, held-back sample
Member liaison and agronomy	10	16	340 members
Welfare	4	5	—
Sales, admin and accounts	11	14	—
Total	219	294	21.2m stems; 721 t; 340 members

The 11 people in the vase-life laboratory are the commitment made flesh. Their salaries are ₹0.26 crore — ₹2.36 lakh average CTC across 11 — and ₹0.12 crore covers the test chambers, standard solutions and the batch-tracking system that lets a bunch be traced back to a cutting time three weeks later. The whole apparatus of testing, cold chain and warranty is ₹1.54 crore, or 10.3% of revenue, and ₹0.73 per stem across 21.2 million stems.

Where the three days came from	Days	What changed
Cut to pre-cooling inside thirty minutes	+1.8	The single largest item, and it is a scheduling change rather than a purchase
Hydration and pulsing at the bench	+0.6	Stems into solution at the cutting point, not at the pack-house
Cold rooms instead of a shaded shed	+0.5	Graded stems held cold ahead of dispatch rather than waiting warm
Reefer dispatch instead of open transport	+0.3	Protects what the first three steps preserved
Total gain, published figure	+3.2	6.2 → 9.4 days, no new variety and no chemical

The first row is worth more than the other three together and it costs the least. Moving a stem from the cutting bench into pre-cooling inside half an hour is a rota decision, not a capital item — the cooler was going to be built anyway. THAT IS WHY THIS IS A FINDING RATHER THAN AN ENGINEERING PROBLEM: the biggest single improvement available to Indian cut flowers is free, and it is not made because nobody in the chain is measured on it.

11. Implementation Timeline & Milestones

Phase	Months	Milestone
Registrations and finance	0-4	State horticulture registration, MIDH and NHB scheme sanction, APEDA, term loan, lease registered
Polyhouse construction	2-14	6.5 ha of structures, fertigation and planting stock established in phases
Pre-cooling and cold rooms	3-10	Commissioned before the first commercial cut, because a stem cut into an unfinished cold chain has already lost what this plan sells
Vase-life laboratory	5-11	Chambers, standard solutions and the batch-tracking system; baseline figures established before anything is published
Member enrolment	8-26	150 → 340 members; batch vase-life results returned free
Warranty launch	12-18	Published figure and automatic credit issued to buyers

Milestone that must not slip	Why
Cold chain before the first cut	Vase life cannot be recovered later. A season handled warm is a season of batches that would fail any figure worth publishing
Baseline before publication	A figure published before it has been measured across a full season is a marketing claim, and this trade has plenty of those
Batch numbering before the warranty	A credit against a batch that cannot be identified is unadministrable and will quietly lapse
Polyhouse phasing to the planting calendar	Rose stock planted outside its window costs a year of the crop cycle on a structure already depreciating

12. Financial Plan (Illustrative)

All figures are illustrative model assumptions in Indian rupees, not forecasts or guarantees. Drivers are shown so every number can be changed.

12.1 Revenue build (₹ lakh)

Stream	Yr 1	Yr 2	Yr 3	Share	GM
Polyhouse rose, graded, pre-cooled and tested	288	372	450	30.0%	46.0%
Polyhouse gerbera and carnation	138	192	240	16.0%	42.0%
Open-field loose flowers	198	252	300	20.0%	30.0%
Member flowers, graded and dispatched	110	168	225	15.0%	16.0%
Cold-chain, pre-cooling and vase-life testing service	102	144	180	12.0%	56.0%
Planting material, nursery and agronomy	64	72	105	7.0%	58.0%
Total	900	1,200	1,500	100%	39.7%

The service line at 12% of revenue is the quiet key to this plan. The cold chain had to be built to protect our own vase life; having built it, selling capacity to growers who have none earns ₹1.80 crore at 56% gross margin on an asset that would otherwise sit idle between our own cuts. Without it the commitment would cost ₹1.54 crore against ₹0.62 crore of PAT and this plan would not be bankable.

12.2 What is committed, and what it is measured on

Commitment	Yr 1	Yr 3
Batches with vase life measured on a held-back sample / published with the batch	47% / no	100% / yes
Published vase life, roses, standard conditions	6.2 days	9.4 days
Cut to pre-cooling / batches inside the 30-minute window	4h 10m / 22%	24 minutes / 96%
Batches credited for underperforming the published figure / value	41 / ₹0.04cr	214 / ₹0.22cr
Stems downgraded because the sample failed / gross profit forgone	0.4m / ₹0.11cr	1.6m / ₹0.43cr
Members receiving their own batch vase-life result free	0%	100%

Row two is the only one a buyer would ever notice and row three is what produced it. Three extra days of vase life came almost entirely from moving cut-to-cooling from four hours to twenty-four minutes — not from a variety, a chemical or a claim. And row four is the honesty test: 214 credits issued in a year, unprompted, to buyers who did not know anything was wrong.

12.3 Profit & loss (₹ lakh)

Line	Yr 1	Yr 2	Yr 3
Revenue	900	1,200	1,500
Cost of goods (planting stock, inputs, member purchase, power, packing)	(538)	(723)	(904)
Gross profit	362	477	596
Vase-life testing and publication	(22)	(30)	(38)
Cold chain: pre-cooling, hydration, cold rooms, elapsed-time recording	(52)	(72)	(94)
Vase-life credits issued automatically	(8)	(14)	(22)
Selling and distribution	(42)	(56)	(70)
Farm, polyhouse and welfare overhead	(76)	(94)	(112)
Administration	(30)	(36)	(42)
EBITDA	132	175	218
Depreciation and amortisation	(76)	(88)	(100)
Finance cost	(46)	(52)	(56)
Other income (planting material, crate hire, misc)	8	11	14
PBT	18	46	76
Tax (agricultural income exempt, ~18% effective)	(3)	(8)	(14)

PAT	15	38	62
Net margin	1.7%	3.2%	4.1%
ROCE on ₹9.50cr	5.9%	9.2%	12.4%

Depreciation of ₹1.00 crore against ₹2.18 crore of EBITDA is the defining fact of protected cultivation, and it is not a modelling choice. Polyhouse cladding is replaced every three to four years, structures and fertigation depreciate fast, and rose planting stock is itself a wasting asset replanted on a cycle. A floriculture plan showing thin depreciation is describing a structure that will not be there in Year 6.

12.4 Project cost & funding (₹ lakh)

Use of funds	₹L	%	Source of funds	₹L
Polyhouse structures and fertigation, 6.5 ha	342	36%	Promoter equity	342
Pre-cooling, cold rooms and reefer dispatch	209	22%	Term loan (NABARD-refinanced)	380
Grading and pack-house	133	14%	MIDH / NHB subsidy	133
Planting material and nursery	95	10%	Working capital limit	95
Vase-life laboratory and batch tracking	57	6%	—	—
Worker housing and welfare	57	6%	—	—
Working capital margin and pre-operative	57	6%	—	—
Total	950	100%	Total	950

12.5 Sensitivities (₹ crore PAT, Year 3)

Scenario	What changes	PAT
Base case as planned	As above	₹0.62cr
Trade-standard practice instead	Ship the 1.6m stems that failed their sample (+₹0.43cr), grade on stem length alone so 2.4m stems move up a grade (+₹0.26cr), sell into the peak with no quality constraint (+₹0.38cr), close the laboratory, the cold-chain discipline and the warranty (+₹1.54cr): revenue ₹16.07cr at 43.7% gross margin	₹2.63cr
The crop times two weeks late on a muhurat cluster	₹1.42cr of gross profit. Polyhouse pruning schedules are set 45 to 55 days ahead and the festival calendar does not move	(₹0.54cr)
Thrips or downy mildew cutting polyhouse output 15%	₹1.26cr including unabsorbed pack-house and cold-room cost	(₹0.41cr)
Rose stem price –12%	₹0.54cr off gross profit	₹0.18cr
Power and wage +12%	₹0.48cr; polyhouse cooling and cold rooms are power-hungry	₹0.23cr

Trade-standard practice earns ₹2.63 crore against ₹0.62 crore — more than four times — and every rupee of the gap is invisible to the buyer. Grade on length alone and nobody can contradict you; ship a batch that failed its sample and the flowers look immaculate on arrival; skip the cold chain and the difference emerges in somebody's living room on Tuesday. **THIS IS THE ONLY PLAN IN THIS VERTICAL WHERE THE ENTIRE COMMITMENT COULD BE ABANDONED TOMORROW WITH ABSOLUTELY NO RISK OF DETECTION, AND A READER SHOULD WEIGH THE GOVERNANCE IN SECTION 3 AGAINST EXACTLY THAT.**

12.6 Volumes and unit economics (Year 3)

Physical driver	Volume	Realisation	Revenue
Polyhouse rose from 4.0 ha at 250 stems/m ² /yr	10.0m stems	₹4.50	₹450L
Gerbera and carnation from 2.5 ha at 320 stems/m ² /yr	8.0m stems	₹3.00	₹240L
Open-field loose flower from 38 ha at 14.3 t/ha	545 t	₹55/kg	₹300L
Member stems and loose flower	3.2m stems; 176 t	₹4.00; ₹55/kg	₹225L
Cold-chain service and nursery	340 members	—	₹285L
Total handled	21.2m stems; 721 t	—	₹1,500L

Derived figure	Working	Result
Polyhouse area	40,000 m ² rose plus 25,000 m ² gerbera and carnation	6.5 ha
Cost of the commitment per stem	₹1.54cr over 21.2m stems	₹0.73, or 10.3% of revenue
Credits per batch	₹0.22cr over 214 batches credited, from 3,860 batches	₹10,280 each, 5.5% of batches
Downgrade on a failed sample	₹4.50 graded against ₹1.80 loose	₹2.70 a stem
Greenhouse and field workers	65,000 m ² ÷ 625 m ² + 38 ha × 1.4/ha	157
Vase-life laboratory cost	₹0.26cr of salary plus ₹0.12cr of equipment and systems	₹0.38cr

Seventy-three paise a stem is what it costs to know, publish and guarantee how long a flower will last. Against a ₹4.50 stem that is substantial, and against three extra days of vase life on somebody's table it is not — but nobody has ever been able to charge for the second thing, which is precisely why nobody spends the first.

Where the ₹1.97 crore of commitments goes	₹cr	Would it survive a bad quarter?
Cold chain: pre-cooling, hydration, cold rooms, elapsed time	0.94	Yes. It is also the asset the ₹1.80cr service line runs on
Downgrade on a failed sample	0.43	The first thing to go, which is why it is a board rule
Vase-life testing and publication	0.38	Cheapest line here and the one everything else depends on
Credits issued automatically	0.22	Automatic by design; a sales manager never sees it

Only ₹0.38 crore of that is the measurement itself. The ₹0.94 crore cold chain would be justified on loss reduction alone and earns ₹1.80 crore of service revenue besides; the ₹0.65 crore of downgrades and credits is the part that is a pure transfer to the buyer. A lender should read the split that way: ₹1.32 crore is a return on capital and ₹0.65 crore is a decision about what kind of business this is.

13. Funding Requirement & Bankability

Item	Position
Requirement	₹9.50cr: ₹3.42cr promoter equity, ₹3.80cr term loan, ₹1.33cr MIDH/NHB subsidy, ₹0.95cr working capital limit
Security	Polyhouse structures, cold chain, pack-house and laboratory; hypothecation of stock and receivables; personal guarantee of the promoter
Debt service	Year 3 EBITDA ₹2.18cr against interest ₹0.56cr and scheduled repayment; DSCR above 1.6x from Year 3
The depreciation question	₹1.00cr of annual depreciation against ₹2.18cr of EBITDA. Cladding replacement and planting-stock renewal are real cash calls on a three-to-four-year cycle and the model carries them; a file that shows them as accounting entries is understating the reinvestment this business requires
Subsidy risk	₹1.33cr reimbursed against completed and inspected structures; a 12-month lag is assumed on the working capital limit
What a lender should test	Not the yield per square metre — the credit register. A vase-life warranty with no credits issued is a warranty nobody is measuring against, and this is a trade in which not measuring would never be discovered

Year	EBITDA	Interest	Repayment	DSCR
Year 1	₹1.32cr	₹0.46cr	Moratorium	—
Year 2	₹1.75cr	₹0.52cr	₹0.48cr	1.75x
Year 3	₹2.18cr	₹0.56cr	₹0.76cr	1.65x

14. Risk Analysis & Mitigation

Risk	Impact	Mitigation
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The product is a duration and it reveals itself after the sale	Everything the trade grades — length, bud, colour, blemish — is visible at purchase, and vase life is not. A rose held six hours at 28°C loses perhaps four days and is indistinguishable next morning from one pre-cooled in twenty minutes: THE DAMAGE IS ALREADY DONE, ALREADY PAID FOR AND ENTIRELY INVISIBLE. And flowers are bought for somebody else — a gift, an event, a temple — so THE PERSON WHO PAID HANDS THEM OVER AND NEVER SEES DAY FOUR, while the person who does has no idea who sold them. THE FEEDBACK LOOP IS NOT WEAK, IT IS STRUCTURALLY ABSENT	MEASURE THE DURATION, PUBLISH IT, WARRANT IT. A held-back sample from every batch into the laboratory — standard solution, 20°C, days to 50% senescence — with the result PUBLISHED WITH THE BATCH (100% by Year 3) and returned free to the member who grew it. PUBLISHED ROSE VASE LIFE 6.2 → 9.4 DAYS, from handling rather than variety. AND A CREDIT ISSUED AUTOMATICALLY ON THE LABORATORY RESULT — 214 batches, ₹0.22cr — WITHOUT THE BUYER ASKING, BECAUSE THE BUYER CANNOT KNOW TO ASK. GENERAL RULE: WHERE THE ONLY ATTRIBUTE THAT MATTERS IS A DURATION REVEALED AFTER THE SALE TO SOMEBODY WHO DID NOT PAY, NO COMPLAINT WILL EVER REACH YOU — SO MEASURE THE DURATION, PUBLISH IT, AND WARRANT IT
Nobody in the chain is paid by the clock	Vase life is spent in the hours after cutting, and cutting labour is paid per stem, the transporter per trip, the agent per stem sold, the vendor per bunch. Every party is paid for a quantity and none for a speed — so a crate left three extra hours on a bay costs whoever left it exactly nothing, while the delay consumes the only attribute the eventual holder cares about	Pre-cooling within thirty minutes of the cut, hydration and pulsing at the bench, cold rooms rather than a shaded shed, reefer dispatch, and ELAPSED TIME RECORDED AT EVERY STEP so a slow batch has a name attached. Cut-to-cooling 4h 10m → 24 minutes and batches inside the window 22% → 96%. That single change is most of the three days, and it needed no technology the export bench did not already use
Festival timing	Polyhouse pruning schedules are set 45 to 55 days ahead and the muhurat calendar does not move. A crop timing two weeks late costs ₹1.42cr of gross profit and a ₹0.54cr loss, and every grower in the district is timing for the same dates, so the peak floods and the trough starves	Staggered pruning blocks rather than a single schedule; open-field loose flower on a different calendar and different buyers; the cold-chain service earns through the trough on other people's flowers; cold rooms allow a few days of holding that a shaded shed does not
Pest and disease under protected cultivation	Thrips, red spider mite, downy mildew and botrytis move fast in an enclosed structure; a 15% output loss with unabsorbed fixed cost is ₹1.26cr and a ₹0.41cr loss	Scouting thresholds and biological control where available; strict re-entry intervals under the Insecticides Act, which matter more inside a polyhouse than outside one; structure hygiene and staged planting so one house does not carry the whole crop
Power reliability and cost	Cooling, fertigation and cold rooms all run on power, and a cold room lost overnight is the most expensive loss in the chain	Backup sized for cold rooms and pre-cooling; solar on polyhouse-adjacent roof area; the elapsed-time record attributes any such event rather than absorbing it
Price volatility	Stem prices swing many times over between an ordinary week and a peak; a 12% fall on rose is ₹0.54cr	Four revenue lines on different cycles; the service line is unlinked to stem price
Member concentration	340 members can sell to any agent for same-day cash	Pre-cooling, grading and a free vase-life result are what no agent offers

15. SWOT Analysis

Strengths	Weaknesses
Polyhouse, open field, pre-cooling, cold rooms and a vase-life laboratory in a single entity, which is the only configuration in which a duration can be measured and then guaranteed; a cold chain that earns ₹1.80cr selling capacity between our own cuts; four revenue lines on different demand cycles; a warranty that runs automatically off a laboratory result rather than through a sales manager	Thin and capital-heavy — 4.1% net margin, 12.4% ROCE and ₹1.00cr of annual depreciation on structures replaced every three to four years; the commitment costs ₹1.54cr against ₹0.62cr of PAT; festival timing risk is unhedgeable; ₹1.33cr of subsidy carried as a receivable
Opportunities	Threats
No competitor in the domestic trade publishes a vase life, so the first credible figure defines the standard; hotels, event companies and online florists all carry complaints they cannot trace and would pay to stop; the district has almost no pre-cooling capacity; export discipline already exists in the country and only needs pointing at the domestic buyer	Nothing prevents a competitor publishing an unmeasured figure and undercutting a measured one; festival timing; disease under protected cultivation; power cost and reliability; and the plain fact that no domestic buyer can currently verify any claim anybody makes, including ours

The last threat is the serious one and it deserves stating plainly. In a market where nobody can verify a vase-life claim, an honest measured figure competes directly against a dishonest invented one, and the invented one is cheaper to produce and can be set higher. The only defence is the credit register: a business that issues 214 credits a year against its own published figure is demonstrably measuring something, and one that issues none is not.

16. Recommended AiSevak Tools for This Business

- **Business plan and project report generator** — for the MIDH and NHB protected-cultivation file and the term loan appraisal.
- **Compliance calendar** — scheme inspections, APEDA and phytosanitary renewals, Insecticides Act records, EPF, ESI and labour registers.
- **Cost and pricing calculator** — cost per stem by house and by block, grade netbacks, and the cold-chain cost per batch.
- **GST and invoicing helper** — the agricultural versus service split, member purchase vouchers, reverse charge, service GST on cold chain and testing.
- **Labour and payroll toolkit** — cutting and grading crew muster rolls, direct engagement records, welfare registers.
- **Loan and subsidy application helper** — milestone-based MIDH and NHB claims and the working capital assessment that carries a 12-month lag.
- **Contract and terms drafting helper** — the published vase-life specification, the automatic credit terms, and the member supply agreement.

Every tool above is **free to use on AiSevak and needs no signup to explore**. The toolkit link at the end of this plan opens the whole plantation set.

17. Key Assumptions & Notes

- **All financials are illustrative model assumptions, not forecasts, projections or guarantees.** Revenue, area, stem yields, prices, vase-life figures and credit rates are editable inputs; outcomes depend on festival timing, disease pressure, power cost and market prices. Figures are in Indian rupees. **This plan is the sixth in vertical 55 and inherits its ten anchor rules (a)-(j).**
- **The central finding is that the only attribute that matters in a cut flower is a duration, it reveals itself entirely after the sale, and the person who paid is usually not the person who watches it happen.** Length, bud, colour and blemish are all visible at purchase and all priced; **vase life is invisible at purchase and priced nowhere.**
- **The chain is not concealing anything — the architecture of the transaction destroys the feedback.** Flowers are bought as gifts, event decoration and offerings, so **the buyer hands them over and never sees day four, and the person who does has no idea who sold them. The loop is not weak or slow; it is structurally absent. GENERAL RULE: WHERE THE ONLY ATTRIBUTE THAT MATTERS IS A DURATION REVEALED AFTER THE SALE TO SOMEBODY WHO DID NOT PAY, NO COMPLAINT WILL EVER REACH YOU — SO MEASURE THE DURATION, PUBLISH IT, AND WARRANT IT.**
- **The second thread is that nobody in the chain is paid by the clock.** Cutting labour is paid per stem, the transporter per trip, the agent per stem sold, the vendor per bunch — **every party is paid for a quantity and none for a speed**, so an extra three hours on a loading bay costs whoever caused it nothing at all. Cut-to-pre-cooling fell from 4h 10m to 24 minutes, which is most of the three days of vase life gained.
- **The warranty is automatic by design.** The credit runs off the laboratory result without a sales manager reviewing it, **because in a trade where the buyer cannot detect the failure and will not complain, declining quietly would never be found out.** 214 credits and ₹0.22cr in Year 3, issued to buyers who did not know anything was wrong.
- **Volumes and unit economics.** 21.2m stems and 721 t handled: 10.0m rose stems at ₹4.50 from 4.0 ha at 250 stems/m²/yr, 8.0m gerbera and carnation at ₹3.00 from 2.5 ha at 320 stems/m²/yr, 545 t of loose flower at ₹55/kg from 38 ha at 14.3 t/ha, and 3.2m member stems plus 176 t. The commitment costs ₹0.73 per stem, or 10.3% of revenue. Field and greenhouse headcount is derived, not assumed: $65,000 \text{ m}^2 \div 625 \text{ m}^2 + 38 \text{ ha} \times 1.4/\text{ha} = 157$.
- **The commitment is affordable only because of the service line.** The cold chain built to protect our own vase life earns ₹1.80cr at 56% gross margin selling capacity to growers who have none. **Without it, ₹1.54cr of commitment against ₹0.62cr of PAT would not be bankable — and that is a genuine dependency, not a rhetorical flourish.**
- **Compliance and professional advice.** MIDH and National Horticulture Board protected-cultivation and cold-chain scheme conditions; APEDA registration and phytosanitary certification under the Plant Quarantine Order for any export line; **the Insecticides Act 1968 and Rules 1971, whose label doses and re-entry intervals apply inside a polyhouse exactly as in the open and matter more there;** royalty and licence terms on protected rose and gerbera varieties and the Protection of Plant Varieties and Farmers' Rights Act; EPF, ESI and Minimum Wages with cutting and grading crews engaged directly; section 10(1) treatment of agricultural income and GST on the service and trading lines; water and electricity approvals; plastic waste rules for cladding replacement; Legal Metrology for loose flower. **Flowers are not food, so there is no standard for vase life, no obligation to declare handling and no route by which a domestic buyer could establish that a batch underperformed — the absence follows from the category, and the only party who can create a standard here is a seller willing to be bound by one.** Professional advice should be taken on lease and scheme conditions, variety licensing, the agricultural-income split, and the contractual standing of a published vase-life figure and its automatic credit.

► **Use these tools now — free on AiSevak**

Every tool referenced in this plan is available on aisevak.in. Open the [Plantation and Estate Agriculture toolkit](#) to browse and use them all at <https://aisevak.in/verticals/plantation> — or go straight to any specific tool at <https://aisevak.in/service/<tool-name>>. No signup needed to explore; each tool guides you step by step.

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