

UHDP Apple Orchard Establishment

Revolutionising Apple Farming in India

From
Himalayan Hills
to
Global Markets



**ORCHARD
SOLUTIONS**

LEADING ORCHARD DEVELOPER &
CONSULTANT IN INDIA

UHDP Apple Orchard

-  3-4X Yield
-  Better Quality
-  50% Less Land
-  More Income
-  Eco-Friendly

A New Dawn for Apple Farming

Did you know?

India grows just **2% of the world's apples**—and exports only a fraction of it. Despite having the **perfect Himalayan climate and fertile soils**, Indian apple farming still lags behind global leaders.

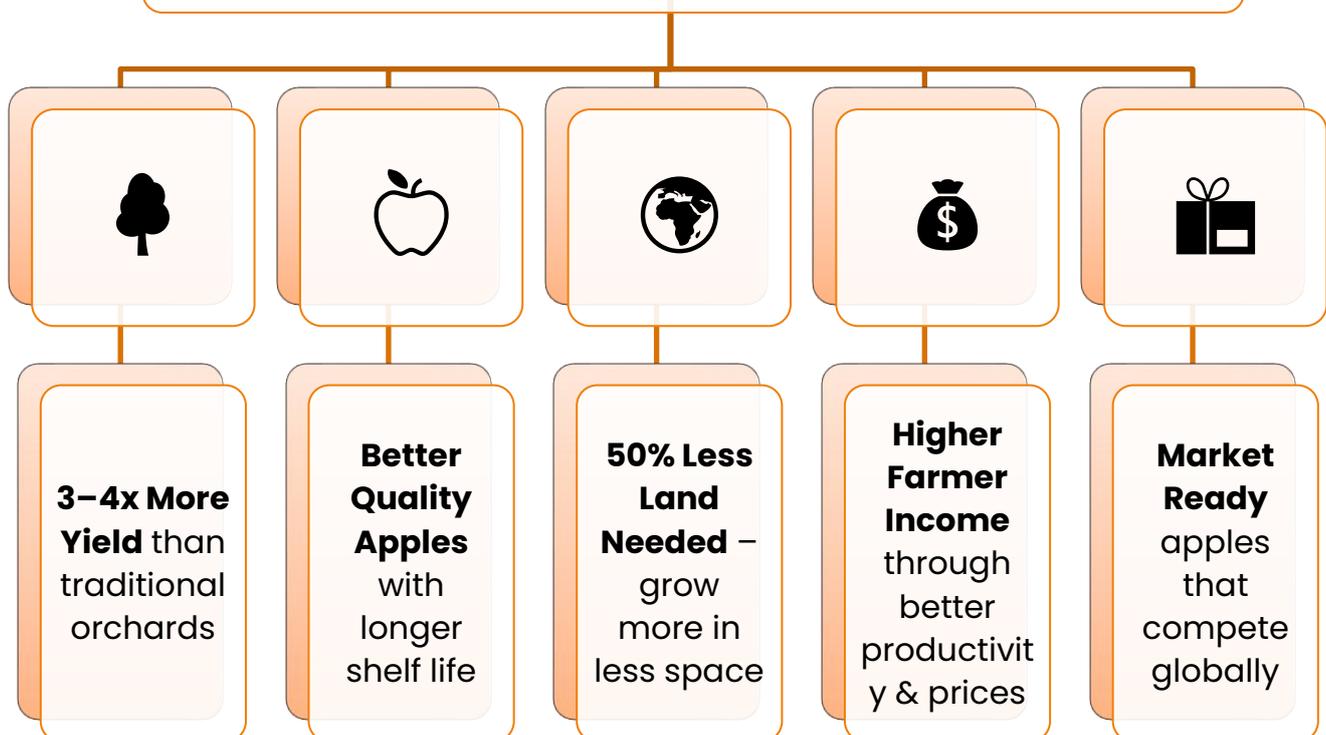
The reason? Traditional practices, low productivity, and limited modern technology.

But change is here.

Ultra High-Density Planting (UHDP) is set to **redefine apple farming** in India—bringing higher yields, better quality, and more profits for farmers.

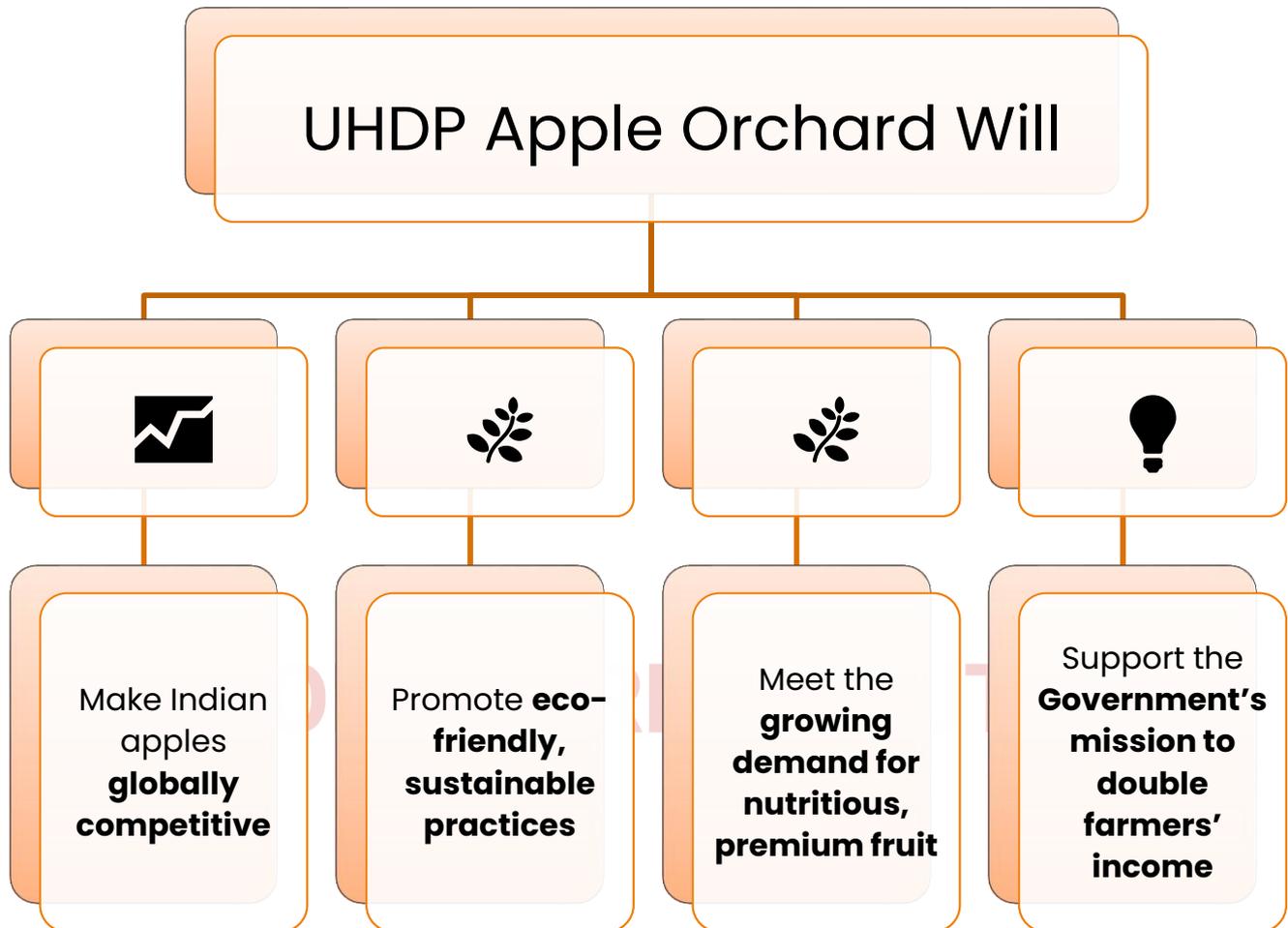
Why Ultra High-Density (UHD) Apple Farming?

UHDP isn't just farming—**it's farming smarter.**



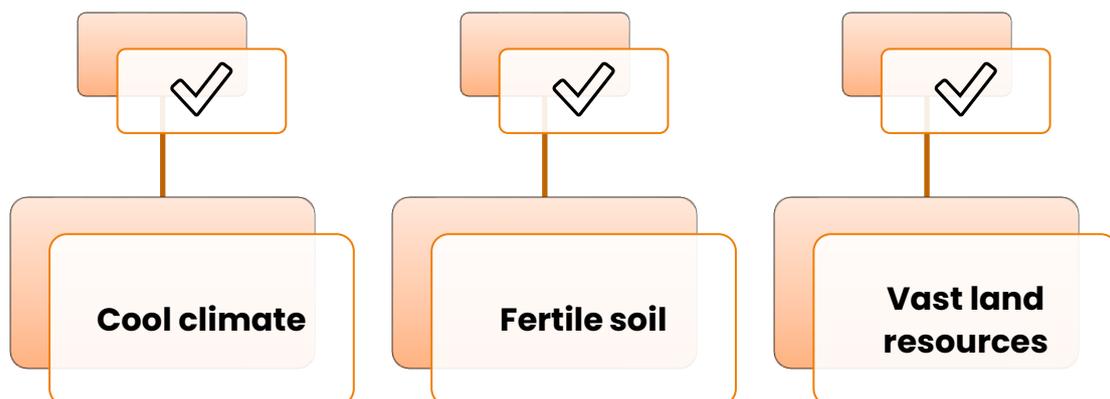
India's Big Opportunity

India imports lakhs of tonnes of apples every year to meet rising demand. But with UHDP, the story can change.



The Himalayan states

The Himalayan states already have what the world's best apple regions need:



Project Proposal

We propose the establishment of an **Ultra-High-Density Apple Orchard** in India's most suitable apple-growing regions. This project will harness the power of **modern UHDP technology** and **superior plant genetics** to create:



Our vision is to set a new benchmark in apple cultivation—**blending science, technology, and nature** to meet both domestic and global demand.

Project Highlights

Strategic Site Selection

- Choosing the best location and transforming it into a world-class orchard.

Modern Trellis System

- Strong, high-quality support for healthier trees and better yields.

High-Density Planting

- Advanced rootstocks for maximum productivity and premium apple quality.

Comprehensive Financial Plan

- Covering land prep, planting, labour, equipment, and maintenance.

Phased Implementation

- Step-by-step execution ensuring efficiency and timely delivery.

Expert Execution

- Powered by **Orchard Solutions**, a trusted name in Indian horticulture.

Dedicated Specialist Team

- Horticulturists, agronomists & technicians driving success with ongoing support.

Transforming Indian Apple Farming

- One orchard at a time!

Infrastructural Components in Orchard Establishment

To ensure the success of an Ultra High-Density Apple Orchard (UHDP), several modern infrastructure components are installed. Each plays a vital role in supporting growth, protecting crops, and improving overall efficiency.

1. Trellis System

A strong **trellis framework** supports apple trees in high-density planting.

- Made of GI poles, wires, ceiling wires, anchors, locks, and clips
- Keeps trees upright and stable
- Helps bear the weight of fruit without damage



2. Anti-Hail Net

Hailstorms can devastate orchards. The anti-hail net provides complete protection.

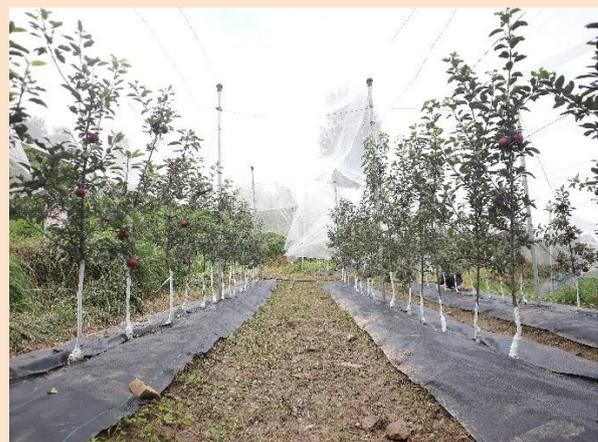
- Flexible, high-strength netting attached to the trellis
- Shields trees and fruits from hail damage
- Covers the entire orchard for maximum safety



3. Perforated Weed Mulch

A smart solution to control weeds while conserving soil health.

- Black plastic sheets spread between rows
- Perforations allow water to pass through, but block sunlight
- Prevents weeds, retains soil moisture, and reduces labor



4. Drip Irrigation & Fertigation

Efficient water and nutrient delivery system for healthier trees.

- Network of HDPE pipes and emitters
- Supplies water and fertilizers directly to roots
- Saves water, reduces disease risks, and ensures optimal growth



5. Four-Wire High-Tensile GI Support System

Extra support for fruit-laden branches.

- Four strong GI wires stretched across the trellis posts
- Prevents breakage from heavy fruit load
- Improves orchard stability and fruit quality



Why These Components Matter?

Together, these infrastructure

They form the backbone of UHDP apple farming, and will be an integral part of the proposed development plan.



Strain Varieties for UHDP Apple Orchards

Available Apple Varieties

Ultra High-Density Orchards (UHDP) require **specially selected apple varieties** that balance **yield, quality, and market demand**. Below is a summary of some promising strains.

Kingrot (Italy, Gala Mutation)



- 🌱 Medium growth, compact, highly productive
- 🍏 Deep solid red, very attractive finish
- 📅 Mid-season harvest (same as Gala)
- ✔️ Sweet, crunchy, high pack-out, popular in **European markets**
- ⚠️ Fruit size can be smaller in heavy crop years

Dark Ann Gala (Italy)



- 🌱 Medium vigor, productive, adaptable
- 🍏 Dark red, nearly full coverage, even in low light
- 📅 Standard Gala timing (mid-season)
- ✔️ Sweet, firm, long shelf life, **premium appearance**
- ⚠️ Smaller fruit if overcropped

Jeromine (France, Gala Mutation)



- 🌱 **Medium growth**, very uniform—ideal for UHDP
- 🍏 **Dark purple**-red, 100% coloring, very stable
- 📅 **Slightly** later than Gala (mid-late season)
- ✔️ Premium appearance, sweet, aromatic, long storage, scab resistant
- ⚠️ Licensed variety (royalty restrictions apply)

Devil Gala (Europe)



- 🌱 Medium vigor, upright growth, trellis-friendly
- 🍏 Bright red stripes, eye-catching
- 📅 Mid-season (like Gala)
- ✔️ Crisp, juicy, aromatic, high sugar; fetches premium prices
- ⚠️ Needs strong sunlight for best color development

Granny Smith (Australia, Chance Seedling 1868)

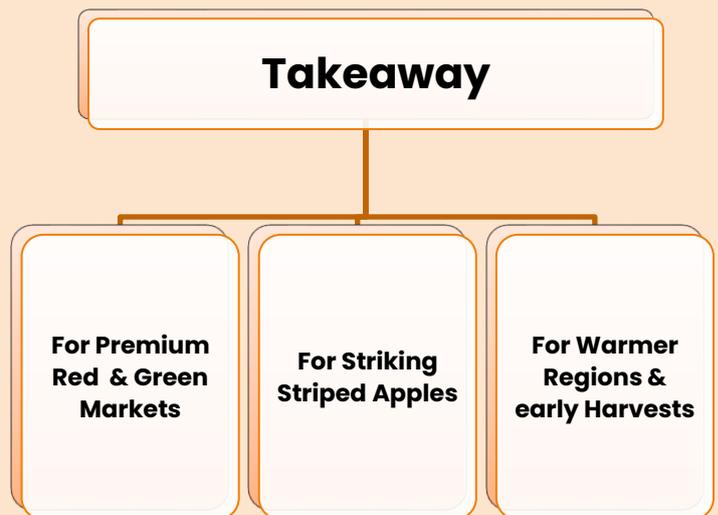


- 🌱 Strong, spreading growth—needs pruning
- 🍏 Green skin, no red, retains color at maturity
- 📅 Late season harvest (after Fuji, Pink Lady)
- ✔️ Tart, crisp, dual-use (fresh & processing), excellent storage
- ⚠️ Needs long season & high chilling zones

T-Rax Gala (Europe/NZ)



- 🌱 Medium vigor, precocious, UHDP friendly
- 🍏 Intense red on 90–95% surface, early coloring
- 📅 Gala timing or a few days earlier
- ✔️ Sweet, crisp, aromatic, high Brix; great for **warmer regions**
- ⚠️ Needs careful thinning to avoid small fruit



Orchard Establishment Cost- 0.5 Acre

Below is a **0.5-acre financial model** including trellis, drip irrigation, anti-hail nets, and weed management.

Tentative Financial Outlay (0.5 Acre/500 Plant)

S. No.	Component	Cost (INR)
1	Land Preparation/Development	60,000
2	Plantation	5,000
3	Planting material (on M9 rootstock)	4,25,000
4	Trellis with Installation	2,40,000
5	Drip Irrigation with Installation	40,000
6	Anti-hail net with Installation	65,000
7	Perforated Weed Mat (100 GSM)	20,000
8	Orchard Boundary Installation	1,30,000
9	Plant Protection Chemicals	3,000
10	Compost, Fertilizers & chemicals (For a year)	25,000
11	Water Storage Tank	20,000
12	Cement, Reta & Bajri	15,000
13	Transport & Misc. Expenses	30,000
	Total Investment	10,78,000

Note: Land Preparation, Transport & Miscellaneous Expenses may vary depending on developing orchard location.

Materials & Services We Provide

S. No.	Component	Cost (INR)
1	Land Preparation & Designing	30000
2	Planting material (on M9 rootstock)	4,25,000
3	Trellis with Installation	2,40,000
4	Drip Irrigation with Installation	40,000
5	Anti-hail net with Installation	65,000
6	Perforated Weed Mat (100 GSM)	20,000
7	Orchard Boundary Installation	1,30,000
8	Vermi Compost	4,000
	Total Investment	9,54,000

ROI & Maintenance Snapshot – 0.5 Acre/500 Plant

A **0.5-acre UHDP apple orchard** with **500 plants (M9/Geneva rootstock)** can generate exceptional returns once commercial yield begins.

Long-Term Outlook

Approximate sale in next 13 years after

5th year: ₹1,63,80,000

Total Sale in 18 Years (Approx.):

₹1,81,00,000

Total Investment & Expenses (Approx.):

₹75,00,000

Estimated Net Profit: ₹1,06,00,000

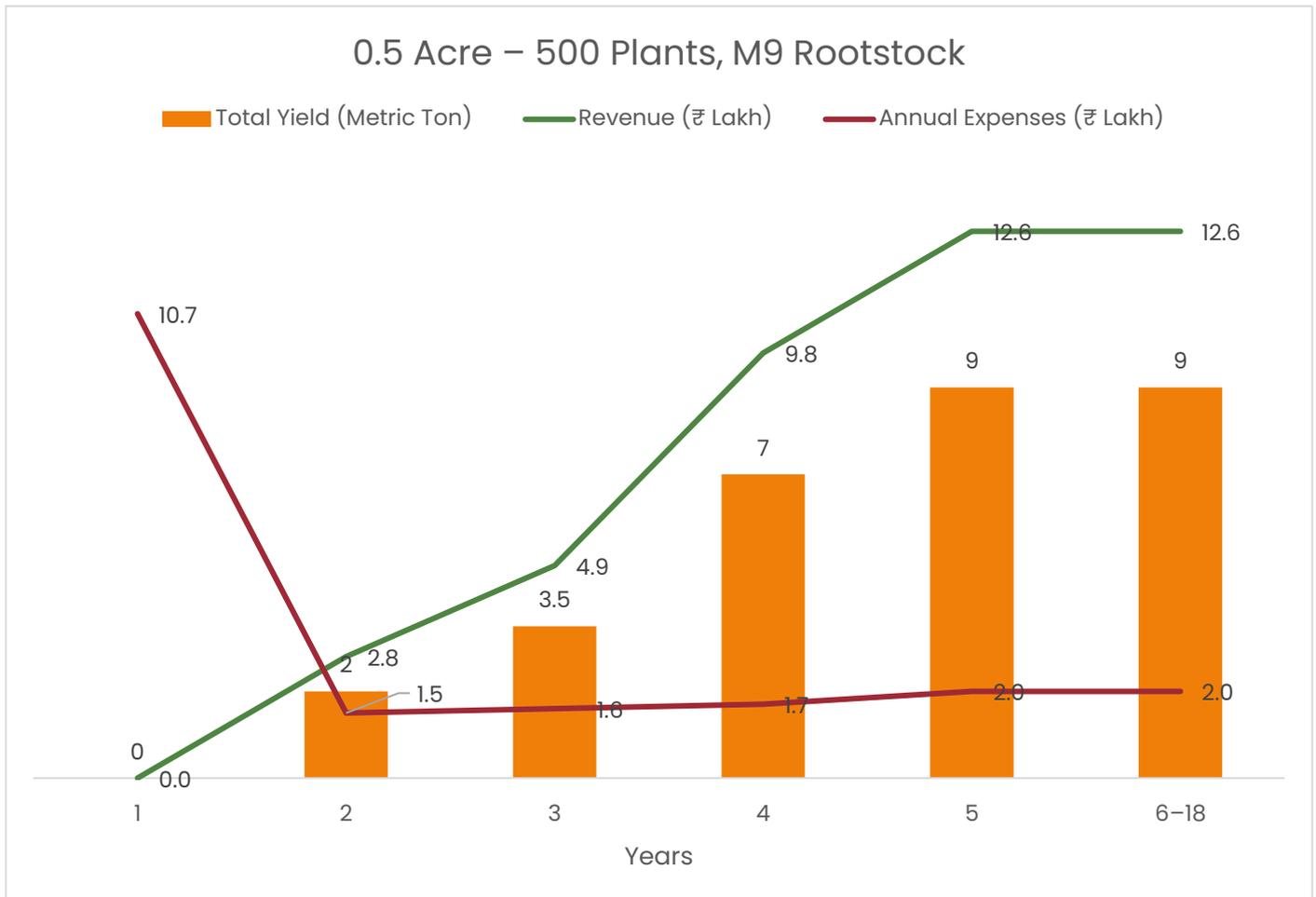
Key Insights

Initial investment: ₹10.78 lakh (0.5 Acre)

Break-even: Around 4th year of production.

Strong ROI: Profitability continues up to 18 years with proper orchard management.

Better scalability: Farmer can start with 0.5 acre model and expand later.



The chart is based on **apple price ₹140/kg.**

Important Notes For All Orchard Establishment

Base Price Assumption:

- Calculations are done at **₹140/kg (2025)**. Prices are expected to rise steadily in the next 5-6 years due to **inflation, urban demand, and limited supply**.

Yield Stability:

- After Year 5, the orchard stabilizes at **~18 kg/plant** (18,000 kg/acre). This stable yield continues for 12-13 years with proper management.

Quality Premium:

- UHDP orchards produce **uniform size, better color & high-quality fruits**, which often fetch **30-40% premium prices** over local varieties.

Cost Variation:

- Initial investment & yearly expenses may vary by **location, labor costs, irrigation, and fertilizer prices**. The projection is an **average estimate**.

Risk Factor:

- ROI depends on **proper orchard management** – pest control, irrigation, soil nutrition, and protection from frost/hail. Crop insurance and anti-hail net systems can reduce risks.

Government Support:

- Farmers can benefit from **subsidy schemes** (for rootstocks, drip irrigation, trellis system, etc.) which may reduce actual expenses by **20-30%**.

Price Growth Impact:

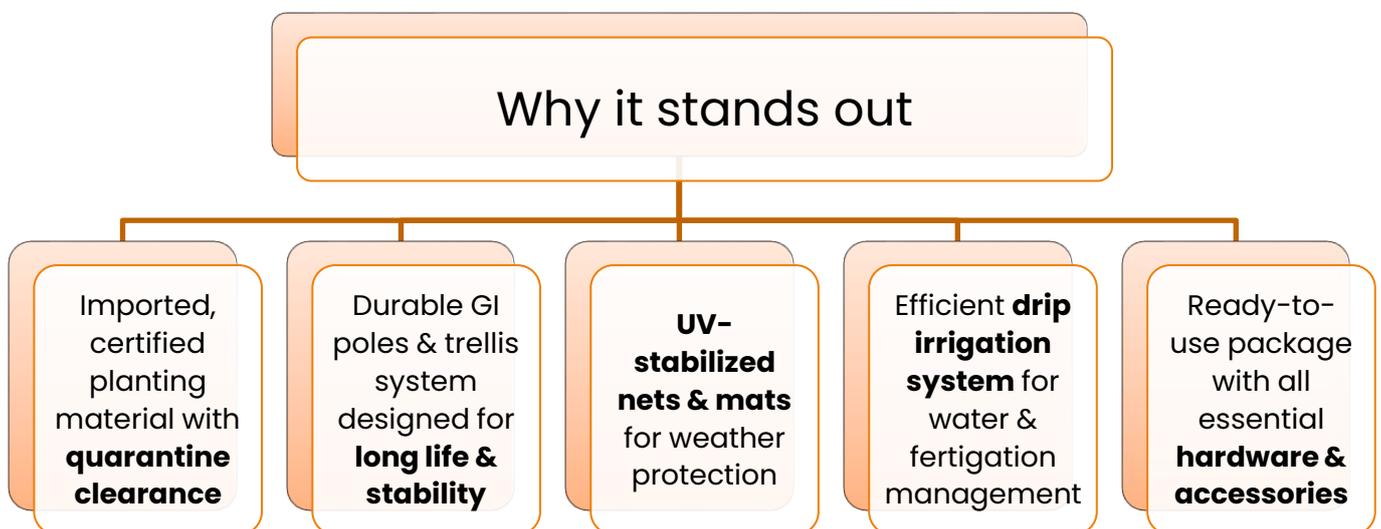
- If apple prices rise from ₹140 → ₹200/kg over 15 years, total revenue can increase by **40-50%**, making net profits even higher than shown.

Product Specifications (Provided by Orchard Solutions)

List of Our high-quality materials & inputs supplied

S.No.	Product Name	Product Specification
1	Planting Material (on MM9)	7+ Feathers (Imported Quarantined Plants)
2	GI Poles	Middle Poles- 4.5 Mtr length, 2" Inner Dia, 2-2.2mm thickness, 5 Holes for passing support wire & ground anchorage, Corner Poles- 4.5 Mtr length, 2.5" Inner Dia, 2.2-2.6mm thickness
3	Anchor	20mm Thickness, 4 Ft length with 6 Inch, 6mm Tikli attached
4	Net Wire	3.2 mm thickness
5	Plants support wire	2.5mm Imported & 2.5mm Indian hot dip
6	Trellis Support Rope wire	6mm Thickness & Hot Dip
7	Other accessories	16mm, 20mm Turn Buckles, U Clamps, Wire Tensioners, Pole locks, Cross & Plane clips, Eye Bolts, Plant Ties, Pole Caps etc
8	Antihailnet	3mtr width * 100 Mtr length, Leno Pattern with 5 years UV stabilized warranty, HDPE Clutchers & Fixtures
9	Perforated Weedmate	100 GSM with Sulzer pattern with UV Stablized warranty
10	Drip Irrigation	Screen Filter, Venturi, Gate walls, 16mm Lateral drip pipe, 16mm flat drip line Double side, GTO sets, elbow tee, 40/50mm HDPE Pipes etc.
11	Boundary	6.5 feet 32mm GI Pole, 5 Ft*50Ft Chain link fencing with 3*3 inch gap, Nut Bolts etc.
12	Vermi Compost	Lab Tested High Quality Vermi Compost

Why it stands out



Orchard Solutions – Turning Land into Prosperity

Why Choose Us

Orchard Solutions is a **trusted horticulture company** transforming the future of apple production in India. With a mission to empower farmers and investors, we deliver **profitable, sustainable, and globally competitive orchards** using the latest technology and proven expertise.

India's Leading Apple Orchard Developer & Consultant

- unmatched expertise in UHDP Apple Farming, on-ground experience in planning, execution, and long-term orchard management.

Trusted Expert Team

- a passionate group of horticulturists, agronomists, and technical specialists dedicated to agriculture.

Proven Track Record

- Our *Team* has successfully established 210+ UHDP apple orchards across HP & UK.

End-to-End Solutions

- from land preparation, plantation, trellis, irrigation, and netting to crop care and harvesting – everything under one roof.

Global-Standard Technology

- advanced rootstocks, modern trellis support, drip irrigation, and anti-hail protection for maximum yield.

Continuous Farmer Support

- ongoing training, handholding, and orchard monitoring to ensure long-term success.

Transparency & Commitment

- clear financial planning, timely execution, and guaranteed project success.