

Nursery Seedling-Trays Production Line

Complete Turnkey Business Proposal



Made-in-China supplier reference: real nursery seedling-trays production line equipment.

50-72 cells launch tray family	4 stations forming basis	15-30 cycles/min screened speed	5-8 entry workforce
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Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

A small thermoforming line producing rigid multi-cell nursery seedling trays from purchased PP or HIPS sheet through sheet conditioning, indexed heating, plug-assisted vacuum/pressure forming, in-mould or downstream cutting, hole punching, rim trimming, stacking, dimensional inspection and planting-performance trials.

Why this project fits Afghanistan

- Afghan vegetable, orchard and greenhouse nurseries need uniform transplant trays.
- Purchased sheet gives the lowest credible entry without a second extrusion plant.
- One cell geometry controls tooling and planting trials.
- Drainage, de-nesting, rigidity and root-ball release determine field usefulness.

Sanaatchi delivery scope

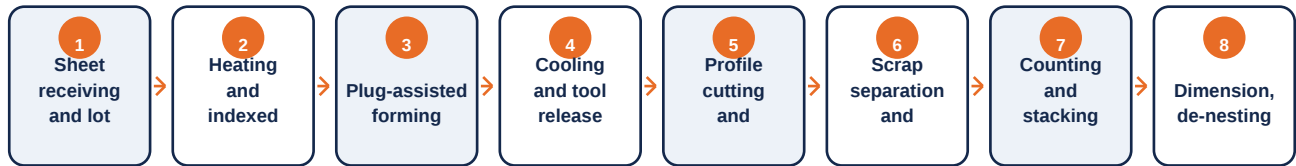
- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

Launch one 50-72 cell tray family on a four-station thermoformer using purchased sheet. Include one proven forming/cutting tool, drainage-hole tooling, chiller, air compressor, scrap granulator and tray/planting tests. Add a separate sheet extruder only after stable volume; a thermoformer alone cannot process loose resin.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Reusable nursery seedling tray	Cell count, cell volume, depth, drainage, rim stiffness, nesting pitch, mass and colour	Commercial nurseries and greenhouse growers
Crop-specific plug tray	Separate approved cell geometry and root-release trial	Vegetable or forestry propagation after validation

Nursery trays are not generic food packs. Acceptance uses the contracted sheet and mould for a sustained run, checks wall distribution, cell depth, drainage-hole position, warpage, rim stiffness, stacking/de-nesting and drop handling, then completes germination, irrigation drainage and root-plug extraction trials. Thin disposable and durable reusable trays require different tooling and sheet gauges.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Four-station thermoformer	Heats, forms and indexes sheet	PP/HIPS sheet duty
2	Forming and cutting mould	Creates one cell family	50-72 cell basis
3	Drainage punch and stacker	Finishes and counts trays	Registered holes
4	Chiller and air compressor	Supports forming cycle	Duty/standby plan
5	Clean-scrap granulator	Reduces trim for controlled recycling	Segregated material
6	Tray test fixtures	Checks dimensions, load and de-nesting	Planting trial included

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Wenzhou Wylong Intelligent Technology Co., Ltd.

Made-in-China supplier reference: real nursery seedling-trays production line equipment.



Made-in-China supplier reference: second real machine configuration for nursery seedling-trays production line.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Qualified PP or HIPS sheet with thickness certificate
- Approved colour and UV package where outdoor life is claimed
- Clean same-grade trim only within validated recycle limit
- Bags, cartons or straps and labels

Utilities & infrastructure

- Stable three-phase electricity with verified connected load
- Closed-loop cooling water sized for the contracted process
- Dry covered material and finished-goods storage
- Ventilation, fire protection, safe lifting and guarded machinery

Quality, safety and environmental controls

- Verify sheet polymer, gauge and surface
- Map wall thickness and cell depth
- Check drainage-hole registration
- Measure rim stiffness, nesting and de-nesting force
- Run loaded handling and drop trials
- Complete crop germination, drainage and plug-release trial

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

The lowest credible route buys qualified sheet and forms one tray family. Integrated sheet extrusion is a later project and should not be hidden inside a cheap thermoformer quotation.

Component	Indicative range	Notes
Four-station thermoformer and sheet handling	US\$28k-65k	Purchased-sheet entry route
One tray mould, punch and stacker	US\$12k-32k	50-72 cell family
Cooling, air, granulator and tests	US\$8k-22k	Essential auxiliaries
Freight, installation and spares	US\$10k-28k	Mould trial included
Indicative installed low-entry total	US\$58k-147k	Sheet extruder, building and stock excluded

Implementation sequence

Phase 1	2-5 weeks	Confirm product specification, representative raw material, buyer, capacity, site and utilities
Phase 2	3-7 weeks	Run supplier trials with the buyer material and freeze the balanced machine, tooling and utility scope
Phase 3	8-22 weeks	Manufacture or refurbish, inspect, document and ship the contracted equipment
Phase 4	3-12 weeks	Install, commission, train operators and pass material-specific acceptance tests

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

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Research and image references

- <https://zj-wylong.en.made-in-china.com/product/cUvYwQFPASVp/China-Automatic-Seedling-Tray-Thermoforming-Machine-4-Station-Plastic-Former-Nursery-Pots-Production-Line.html>
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