

# Small Cotton-Ginning Line

Complete Turnkey Business Proposal



*Supplier reference: installed multi-machine cotton ginning line.*

|                                       |                                        |                               |                                         |
|---------------------------------------|----------------------------------------|-------------------------------|-----------------------------------------|
| <b>0.2-1.0 t/h</b><br>screening range | <b>15-60 kW</b><br>line-dependent load | <b>5-8</b><br>entry operators | <b>2 outputs</b><br>lint and cottonseed |
|---------------------------------------|----------------------------------------|-------------------------------|-----------------------------------------|

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

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A small cotton-ginning line for separating lint from locally grown seed cotton, cleaning the lint and preparing compact bales for spinning mills or traders. The proposal is intentionally limited to ginning and baling; it does not copy the much larger spinning, weaving or garment-factory scope.

### Why this project fits Afghanistan

- Afghan seed cotton can be upgraded locally into saleable lint and cottonseed.
- A smaller ginnery can serve a producing district without the feedstock requirement of a 100-200 t/day plant.
- Cottonseed is a separate by-product for feed or future oil processing.
- Local labor can support receiving, grading, bag handling and bale preparation.

### 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

Begin with controlled seed-cotton feeding, one small roller or saw gin selected after fiber trials, basic lint cleaning, dust collection and a compact hydraulic baler. Drying and advanced pre-cleaning are optional modules only when incoming cotton condition requires them.

## Manufacturing Process & Product Portfolio

### Integrated process flow



### Target products

| Product            | Typical specification                          | Primary market                               |
|--------------------|------------------------------------------------|----------------------------------------------|
| Ginned cotton lint | Buyer-agreed staple, color, trash and moisture | Spinners and cotton traders                  |
| Cottonseed         | Separated and stored dry                       | Feed or oil-processing buyers                |
| Gin waste          | Segregated by contamination                    | Low-grade recovery where safe and economical |

The gin type must be selected from actual fiber trials. Roller gins can be preferred where gentler fiber handling is important; saw-gin arrangements can raise throughput. Supplier claims for capacity vary widely and must be validated with the buyer's seed cotton.

## Core Equipment Schedule

| Step | Equipment                       | Function                                                              | Indicative parameter                                   |
|------|---------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------|
| 1    | Feed floor and hopper           | Meters seed cotton into the process                                   | Manual or simple conveyor-fed entry layout             |
| 2    | Seed-cotton cleaner             | Removes leaves, stems, sand and loose trash                           | Optional modules matched to field contamination        |
| 3    | Moisture-control section        | Conditions cotton when moisture is outside the gin's operating window | Include only after seasonal moisture study             |
| 4    | Roller or saw gin               | Separates lint from cottonseed                                        | Select by fiber trial, output, lint quality and spares |
| 5    | Lint cleaner                    | Reduces remaining trash in lint                                       | Do not over-clean and damage fiber value               |
| 6    | Pneumatic conveying and cyclone | Moves fiber and collects dust                                         | Balance airflow and fire-safe dust handling            |
| 7    | Hydraulic bale press            | Compresses lint for storage and sale                                  | Bale size and density agreed with buyers               |
| 8    | Cottonseed conveyor/bagging     | Collects and packs separated seed                                     | Protect from moisture and cross-contamination          |

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

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*Supplier reference: installed multi-machine cotton ginning line.*



*Supplier reference: compact roller-gin configuration for a smaller entry plant.*

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

## Plant, Raw Materials & Utility Requirements

### Raw materials

- Afghan seed cotton separated by variety and source
- Bale wire or approved strapping
- Bale wrap, tags and lot labels
- Lubricants and wear parts approved for the gin

### Utilities & infrastructure

- Stable three-phase electricity
- Dry covered seed-cotton storage
- High-volume dust extraction and safe discharge
- Fire detection, extinguishing and strict ignition control
- Truck access and segregated cottonseed storage

### Quality, safety and environmental controls

- Grade incoming seed cotton for moisture, trash, variety and contamination
- Trial each candidate gin with representative cotton before purchase
- Test lint moisture, trash, color and fiber damage
- Record bale weight, lot, farm/source and production date
- Inspect bearings, saws or rollers, guards, ducting and fire controls every shift

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

Lowest practical entry: a small gin with controlled feeding, basic lint cleaning, simple cottonseed collection and a compact baler. Do not buy optional drying or heavy automation until seasonal cotton tests justify them.

| Component                               | Indicative range | Notes                                                     |
|-----------------------------------------|------------------|-----------------------------------------------------------|
| Small gin and controlled feeding        | US\$6k-18k       | Entry supplier reference; capacity must be trial-verified |
| Basic cleaner and lint handling         | US\$4k-10k       | Only modules justified by cotton condition                |
| Compact baler and seed collection       | US\$4k-10k       | Buyer-agreed bale format                                  |
| Dust, electrical and local installation | US\$3k-8k        | Fire-safe design is essential                             |
| Freight, clearance and critical spares  | US\$4k-10k       | Depends on packing and destination                        |
| Indicative low-entry total              | US\$21k-56k      | Land, building and seed-cotton stock excluded             |

### Implementation sequence

|         |            |                                                                     |
|---------|------------|---------------------------------------------------------------------|
| Phase 1 | 2-3 weeks  | Survey seasonal seed-cotton volume, moisture, trash and lint buyers |
| Phase 2 | 3-5 weeks  | Run fiber trials and compare complete ginning and baling scopes     |
| Phase 3 | 6-10 weeks | Manufacture, inspect and ship the selected equipment                |
| Phase 4 | 3-4 weeks  | Install dust and fire systems, commission and approve trial bales   |

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

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### 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://hcmgjb.en.made-in-china.com/product/tewnaIJHRGUD/China-Complete-Cotton-Ginning-Delinting-Line.html>

- <https://www.made-in-china.com/showroom/44e00543fe2e0dc3/product-detailQOKTRZwmpUB/China-Small-Cotton-Gin-Machine-Energy-Saving-45kw-Roller-Cotton-Ginning-Machine.html>