

# Dried Mulberry & Mulberry Powder Line

Complete Turnkey Business Proposal



*Supplier reference: real enclosed fruit heat-pump dryer suitable for controlled mulberry dehydration.*

|                                                    |                                       |                                            |                               |
|----------------------------------------------------|---------------------------------------|--------------------------------------------|-------------------------------|
| <b>300 kg/batch</b><br>starter fresh-fruit loading | <b>45-60 °C</b><br>trial drying range | <b>20-60 mesh</b><br>powder screen options | <b>5-8</b><br>entry operators |
|----------------------------------------------------|---------------------------------------|--------------------------------------------|-------------------------------|

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 workshop line for sorting, gentle washing, dewatering, low-temperature drying, grading and milling a controlled portion of dried mulberries.

### Why this project fits Afghanistan

- Mulberries are fragile and highly seasonal, so controlled drying can prevent rapid post-harvest loss.
- Whole dried fruit and powder provide two sale grades from one dryer.
- Powder uses broken but safe dried pieces that may not meet whole-fruit appearance grades.
- A heat-pump batch dryer fits village aggregation better than a large spray-drying plant.

### 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

For the lowest credible entry, select a 300 kg/batch heat-pump dryer with sorting table, gentle washer, centrifugal dewaterer, pin mill and semi-manual packing.

## Manufacturing Process & Product Portfolio

### Integrated process flow



### Target products

| Product                | Typical specification                                   | Primary market                        |
|------------------------|---------------------------------------------------------|---------------------------------------|
| Whole dried mulberries | Buyer-approved moisture, color, size and water activity | Retail, bakery and snack buyers       |
| Mulberry powder        | Declared mesh, moisture and microbiological limits      | Bakery, beverage and ingredient users |

Fresh whole mulberry powder is not made directly in a pin mill; fruit must first reach a safe stable moisture. Spray drying applies to clarified juice or puree and is a separate, higher-investment process.

## Core Equipment Schedule

| Step | Equipment               | Function                                    | Indicative parameter                 |
|------|-------------------------|---------------------------------------------|--------------------------------------|
| 1    | Sorting table           | Removes leaves, mold and damaged fruit      | Good lighting and food-grade surface |
| 2    | Gentle bubble washer    | Cleans berries with limited bruising        | Short residence and potable rinse    |
| 3    | Dewatering centrifuge   | Removes surface water before drying         | Low-damage basket or air knife       |
| 4    | Heat-pump tray dryer    | Dries berries at controlled low temperature | 300 kg/batch starter                 |
| 5    | Conditioning bins       | Equalizes moisture before grading           | Food-grade covered containers        |
| 6    | Vibratory grader        | Separates whole saleable fruit and fines    | Interchangeable screens              |
| 7    | Pin mill and sieve      | Produces powder from released dry lots      | Low-heat milling with dust control   |
| 8    | Weigher and band sealer | Packs whole fruit and powder                | Moisture-barrier pouches             |

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



*Supplier reference: real enclosed fruit heat-pump dryer suitable for controlled mulberry dehydration.*



*Supplier reference: real food-grade milling and collection equipment applicable to dried-fruit powder.*

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

## Plant, Raw Materials & Utility Requirements

### Raw materials

- Sound Afghan mulberries
- Potable water
- Moisture-barrier pouches and bulk liners
- Labels, cartons and optional validated oxygen absorber

### Utilities & infrastructure

- Stable three-phase electricity
- Potable process water and hygienic drainage
- Food-grade heat source
- Ventilated washable processing room
- Clean dry packing and finished-goods storage

### Quality, safety and environmental controls

- Reject mold, insects and fermented fruit
- Map dryer temperature and airflow across trays
- Verify moisture and water activity before conditioning
- Release only microbiologically acceptable lots
- Control metal and dust during milling
- Validate powder caking, color and shelf life in final pack

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 entry uses one tray dryer and mills only fully released dry fruit. Spray drying, freeze drying, cold storage, building and seasonal fruit inventory are excluded.

| Component                          | Indicative range | Notes                                        |
|------------------------------------|------------------|----------------------------------------------|
| Sorting, washing and dewatering    | US\$4k-9k        | Gentle compact preparation                   |
| Heat-pump tray dryer               | US\$8k-18k       | 300 kg/batch starter                         |
| Grading, pin mill and dust control | US\$4k-10k       | Small powder route                           |
| Packing and quality tools          | US\$3k-7k        | Two semi-manual formats                      |
| Freight, installation and spares   | US\$4k-9k        | Confirm chamber dimensions                   |
| Indicative low-entry total         | US\$23k-53k      | Building, fruit and working capital excluded |

### Implementation sequence

|         |            |                                                                  |
|---------|------------|------------------------------------------------------------------|
| Phase 1 | 2-3 weeks  | Confirm raw-material, product, capacity and pack specifications  |
| Phase 2 | 2-4 weeks  | Run supplier trials with representative Afghan material          |
| Phase 3 | 6-10 weeks | Manufacture, inspect and ship the selected line                  |
| Phase 4 | 3-5 weeks  | Install, train, validate the process and start shelf-life checks |

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

#### **Sanaatchi Industrial Vision Group**

Afghanistan Office: +93 779 819 820 | [info@sanaatchi.com](mailto:info@sanaatchi.com)

China Office: +86 159 5171 6867 | [china@sanaatchi.com](mailto:china@sanaatchi.com)

Website: [www.sanaatchi.com](http://www.sanaatchi.com)

### Research and image references

- <https://kelidmachine.en.made-in-china.com/product/fdbtyhmTYQrw/China-Mulberry-Hot-Air-Drying-Machine.html>

- <https://wandamech.en.made-in-china.com/product/SmPrBORJaiUW/China-Professional-High-Speed-Liquid-Spray-Dryer-Organic-Spray-Dried-Mulberry-Fruit-Juice-Powder.html>