FPI Online Academy | Species yield analysis | 2026

Moringa drouhardii

Yield evidence, production logic and field validation

SPECIES BRIEF 04 / EXPLORATORY YIELD ASSESSMENT



Moringa drouhardii: living plant photograph. LoJallen / CC BY-SA 4.0. Full credit and source: page 5.

The production decision

A Madagascan bottle-tree species with a conspicuous storage trunk. Its architecture makes it visually impressive, but trunk size is not evidence of a commercially harvestable annual leaf or seed crop.

Identity	Assessment basis
Native range	Madagascar
Life form	Semisucculent dryland bottle tree
Product route	Conservation, propagation and carefully bounded product research

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Author | Research reviewed 22 October 2026

MORINGA DROUHARDII

What the evidence supports

Botanical identity comes before yield

Moringa drouhardii Jum. is treated as an accepted species in the Kew record. This is a species profile, not proof of a named commercial cultivar or a uniform genetic line. The native-range description is an ecological starting point, not a site recommendation. [S1]

Evidence interpretation

Taxonomic evidence confirms a semisucculent tree of dry shrubland settings. No repeat-harvest commercial yield benchmark was established in the selected sources. A biomass claim must identify the harvested organ, stand age and recovery after removal. A photograph of a mature bottle tree supports recognition of the species; it cannot be converted into a production estimate. [S1]

Yield question	Evidence position
Annual saleable output	A local, product-specific time series is still required.
Density and cutting	Test the interaction with survival, recovery and resource use.
Processing recovery	Measure fresh input, dried mass and accepted output separately.
Financial use	Use measured accepted batches; do not treat a hypothetical case as a forecast.

The question this species must answer

What harvest, if any, can be repeated without compromising establishment, stored reserves and long-term plant condition?

How to read a yield claim

A useful figure identifies species or accession, plant age, location, net planted area, product organ, moisture basis, observation period and harvest count. If one of these is missing, keep the number as a research lead rather than a commitment to a buyer. A seed-oil percentage and a nutrient concentration are product attributes; neither is a field-yield measure.

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Turn measurements into usable yield

State the product and time basis

Establishment and seasonal canopy duration first; non-destructive leaf and mature-seed measurements only when appropriate.

Accepted dried leaf = weighed fresh leaf x measured dry recovery x accepted fraction

This is a mass-balance sensitivity, not measured species performance. The assumed recovery and acceptance rates are teaching inputs only. For exploratory species, the calculation illustrates research sampling; it does not approve a food use or recommend harvesting.

Illustrative input	Low recovery	Middle	High recovery
Fresh leaf / sample or batch	1 kg	1 kg	1 kg
Dry recovery fraction	15%	20%	25%
Accepted fraction	95%	95%	95%
Accepted dried material	142.50 g	190.00 g	237.50 g



Do not annualise an unobserved cycle

Add the accepted output from each completed harvest in the observation year. Do not multiply the best cut by an assumed number of cuts. If trial results are extrapolated from a plot, show the measured plot area and the calculation; report production roads, buffers and buildings separately from net planted land.

Keep these units separate	Why it matters
Per plant vs per hectare	Stand density, missing plants and non-producing plants change the area result.
Fresh vs dry vs saleable	Water removal, trimming and quality rejection change the quantity that can be sold.
One batch vs one year	Seasonality, establishment and recovery determine completed production cycles.

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Design a field test that answers the question

Recommended validation approach

Begin with legally sourced nursery plants and a non-harvest observation group. Record leaf-on and leaf-off periods and flowering dates before testing any conservative harvest. Keep provenance and propagation success visible in the analysis.

Three decisions to make from the records

1. Build an annual phenology record before setting harvest dates.
2. Assess harvest recovery against an uncut group.
3. Separate propagation or amenity value from an unproven ingredient business.

Record in every trial	Minimum useful detail
Identity and layout	Accession or seed lot; propagation method; planted and measured area; original plant count.
Inputs and conditions	Water delivered; soil test; weather and stress events; labour; actual management changes.
Harvest and recovery	Date; plant age; organ collected; fresh mass; dry mass; rejection and reason.
Output and use	Accepted product mass; intended customer or research endpoint; batch identity; cost per accepted unit.

Species-specific risk controls

1. Equating stored trunk mass with renewable crop output.
2. Assuming arid-zone survival means high biomass without water.
3. Promoting root or trunk removal as a renewable harvest.

Decision gate

Treat as a conservation and research candidate. Do not advertise a hectare-yield or biofuel-output figure without a documented local trial.

FPI application: connect the production trial with the ABC cluster's actual water, handling, processing, logistics and customer capacity. A productive plant trial is only one part of a viable value chain.

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Evidence, image credit and next decision

Assessment conclusion
Treat as a conservation and research candidate. Do not advertise a hectare-yield or biofuel-output figure without a documented local trial.

Sources and scope

[S1] Royal Botanic Gardens, Kew. Plants of the World Online: Moringa drouhardii. Taxonomy, range and life form. Open source

Research method. Targeted review of accepted taxonomy, primary yield studies where available, and image provenance, checked 22 October 2026. An evidence gap means no transferable commercial benchmark was identified in this review; it is not proof that no unpublished or local trial exists. Proposed trials, decision gates and arithmetic examples are FPI analytical guidance, not observations by the cited researchers.

Photograph provenance

Moringa drouhardii bottle tree Tsimanampetsosa NP.jpg. LoJallen. CC BY-SA 4.0. Source record | Licence

The image is a real photograph identified as this species in its source record; it is not evidence of an FPI field trial. Image resized proportionally for layout; no botanical features generated or replaced. Any adaptation of a share-alike image retains the stated image licence. Image owners and source institutions do not endorse this publication.

Before using the analysis commercially

Replace illustrative inputs with the site's measured results. Confirm the exact botanical species, intended product use, buyer specification and applicable local requirements. Separate field output from accepted saleable product and separate a financial scenario from a verified trading result.

FPI MORINGA YIELD INTELLIGENCE
For farmers, cooperatives, technical teams, buyers and investors assessing production before scale. This brief combines species identity, yield-evidence limits and a practical route to local validation.

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