Moringa pygmaea

Yield evidence, production logic and field validation

SPECIES BRIEF 13 / CONSERVATION-FIRST ASSESSMENT



Moringa pygmaea: preserved botanical specimen photograph. Board of Trustees, Royal Botanic Gardens, Kew / CC BY 4.0. Full credit and source: page 5.

The production decision

The smallest life-form in this portfolio is a tuberous geophyte, not a compact commercial plantation tree. Its analysis must prioritise conservation, documented identity and basic biology rather than an invented industrial yield.

Identity	Assessment basis
Native range	Northeastern Somalia
Life form	Tuberous geophyte
Product route	Conservation and botanical research

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Author | Research reviewed 22 October 2026

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What the evidence supports

Botanical identity comes before yield

Moringa pygmaea Verdc. 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

Kew accepts this northeastern Somali geophyte. The selected evidence does not establish a repeat-harvest cultivated production system or a commercial yield. An authenticated preserved specimen is used here as the species-specific image. It documents plant material; it is not evidence of a productive field, an available seed line or commercial propagation capacity. [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

Can legally sourced material be conserved and studied without damaging a poorly documented biological resource?

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

Accession integrity, viable propagation, seasonal emergence and survival; commercial yield remains unassigned.

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

Any live-plant programme should be designed with appropriate botanical and conservation partners. Start with verified identity and access arrangements. Observe establishment and seasonal behaviour before considering even small harvest experiments.

Three decisions to make from the records

1. Keep conservation and provenance at the centre of the work.
2. Use non-destructive observation whenever feasible.
3. Report absence of yield evidence explicitly rather than filling the gap with a forecast.

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. Calling a tuberous geophyte a dwarf industrial tree.
2. Assuming a herbarium record implies planting material is commercially available.
3. Inventing hectare output by multiplying the yield of another species.

Decision gate

Conservation and basic research are the defensible priorities. Do not promote this species as an established commercial leaf, seed or oil crop.

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
Conservation and basic research are the defensible priorities. Do not promote this species as an established commercial leaf, seed or oil crop.

Sources and scope

[S1] Royal Botanic Gardens, Kew. Plants of the World Online: Moringa pygmaea. 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

Herbarium specimen K000569395. Board of Trustees, Royal Botanic Gardens, Kew. CC BY 4.0. Source record | Licence

The image is a photograph of an authenticated preserved plant specimen, not a living plantation. It supports botanical documentation, not yield. 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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