

What Are Cocoa Shells? Industrial Uses, Benefits and Global Demand for Cocoa Shells in 2026

June 25, 2026

Cocoa shells are one of the main by-products generated during cocoa bean processing. For years, they were largely treated as agricultural waste. Today, cocoa shells are attracting attention from companies looking for alternative biomass fuels, organic raw materials, composting inputs, soil amendments, and feedstocks for further processing.

For an international buyer, however, buying cocoa shells is not simply a matter of finding the lowest price per metric ton.

The material can vary according to its source, processing conditions, moisture level, ash content, particle size, cleanliness and intended application. A specification that works for one factory may not necessarily be suitable for another.

This guide explains what cocoa shells are, where they can be used, what buyers should consider when sourcing them, and how Nigerian-origin cocoa shells can be evaluated for international supply.

For buyers interested specifically in Nigerian supply, see our [Cocoa Shell Supplier Nigeria](#) page.

1. What Are Cocoa Shells?

Cocoa shells, also called cocoa bean shells or cocoa husks in some commercial markets, are the outer material separated from cocoa beans during processing.

During cocoa processing, the beans are roasted and the outer shell is separated from the cocoa nib. The resulting shell is an agricultural by-product that can be collected, handled and prepared for different commercial applications.

The exact characteristics of cocoa shells depend on factors such as:

Cocoa bean origin

- Processing method
- Roasting conditions
- Separation efficiency
- Moisture
- Particle size
- Foreign matter
- Storage and handling conditions

This is why international buyers should avoid treating “cocoa shells” as one completely uniform commodity.

For a broader look at how cocoa shells are sourced and evaluated commercially, see our guide on [How to Source Bulk Cocoa Shells](#).

2. Why Are Cocoa Shells Becoming a Commercial Commodity?

Cocoa shells have several characteristics that make them potentially useful beyond their original role as a cocoa-processing by-product.

Depending on quality and preparation, they can be considered for:

- Biomass fuel
- Boiler fuel
- Pellet and briquette production
- Composting
- Soil amendments
- Organic fertilizer formulations
- Horticultural applications
- Biochar production
- Research and extraction applications
- Other industrial uses

The commercial value depends on the buyer's application.

A biomass operator may be primarily concerned with moisture, calorific value, ash and particle size.

A fertilizer or compost producer may be more interested in organic matter, cleanliness and the characteristics of the complete formulation.

A processor considering extraction may require an entirely different set of specifications.

For this reason, the first question should not be “What is your price?”

It should be:

- “What specification does your application require?”

3. Industrial Uses of Cocoa Shells

Cocoa shells can be used or evaluated across several industrial sectors.

3.1 Biomass Fuel

One of the most commercially interesting applications is biomass energy.

Cocoa shells are an agricultural biomass material and can be considered as a solid biofuel where the characteristics of the material are suitable for the buyer's combustion system.

Potential users include:

- Industrial boilers
- Biomass heating systems
- Co-firing systems
- Thermal processing facilities
- Pellet and briquette manufacturers

However, cocoa shells should not automatically be treated as a direct replacement for wood pellets or coal.

The suitability of the material depends on the equipment and the agreed fuel specification.

Important parameters can include:

- Moisture
- Ash
- Calorific value
- Particle size
- Bulk density
- Foreign matter
- Storage condition

For industrial buyers, these parameters should be evaluated against the actual requirements of the boiler or combustion system.

3.2 Pellet and Briquette Production

Cocoa shells can also be used as a feedstock for pellet or briquette manufacturing.

The material may be processed together with other biomass materials depending on the manufacturer's formulation, equipment and required final fuel characteristics.

Before purchasing, the manufacturer should establish:

- Required particle size
- Moisture range
- Ash tolerance

- Desired pellet density
- Binder requirements
- Production process
- Final fuel specification

A supplier should not assume that one preparation will work for every pellet or briquette plant.

3.3 Composting

Cocoa shells can be incorporated into composting systems as a source of organic material.

Their suitability depends on the overall compost formulation and the balance of carbon-rich and nitrogen-rich materials being used.

For commercial compost producers, important considerations can include:

- Moisture
- Particle size
- Foreign matter
- Organic matter
- Carbon-to-nitrogen balance of the complete mixture
- Storage condition

The cocoa shells should therefore be assessed as part of the complete compost formulation rather than in isolation.

3.4 Soil Amendments and Organic Fertilizer

Cocoa shells may also be considered as an organic input for soil amendment and fertilizer formulations.

However, the nutritional composition of agricultural by-products can vary.

For this reason, buyers manufacturing commercial fertilizer products should obtain appropriate analysis for the material being purchased rather than relying on generic figures found online.

This is especially important where the finished product must meet a particular regulatory or customer specification.

3.5 Biochar Production

Cocoa shells can be used as a biomass feedstock for pyrolysis and biochar production.

The characteristics of the resulting biochar depend on factors including:

- Feedstock characteristics

- Pyrolysis temperature
- Residence time
- Processing technology
- Cooling conditions

Therefore, it is not appropriate to assign one universal biochar yield or carbon content to all cocoa shells.

A buyer considering cocoa shells for biochar production should test the material under the intended processing conditions.

3.6 Research and Extraction Applications

Cocoa shells contain naturally occurring compounds that have been studied for potential recovery and further processing.

These include compounds such as theobromine and polyphenolic substances.

Potential research and industrial areas include:

- Theobromine recovery
- Polyphenol extraction
- Food ingredient research
- Cosmetic applications
- Functional ingredient research
- Biomaterial development

The actual concentration of these compounds varies with the cocoa material and processing conditions.

Therefore, companies purchasing cocoa shells for extraction should specify the required analytical parameters before entering into a supply agreement.

3.7 Animal Feed Applications

Cocoa shells have also been investigated for use in animal-feed applications because of their fiber and organic components.

However, feed use requires more careful evaluation than simply purchasing an agricultural by-product.

Factors such as:

- Theobromine
- Moisture
- Contaminants

- Mycotoxins
- Foreign matter
- Nutritional composition
- Applicable feed regulations

may need to be considered depending on the animal species and intended use.

A feed manufacturer should therefore establish its own acceptance specification before purchasing.

4. What Specifications Should a Buyer Check?

There is no single specification that applies to every cocoa-shell buyer.

The appropriate parameters depend on the intended application.

For example:

Parameter	Why it may matter
Moisture	Affects storage, handling and combustion performance
Ash	Important for many biomass and boiler applications
Calorific value	Important when evaluating fuel performance
Particle size	Important for handling, feeding and processing equipment
Foreign matter	Helps establish cleanliness and suitability
Bulk density	Relevant to storage and transportation planning
Crude fiber	Relevant to some agricultural and feed applications
Nutrient composition	Relevant to fertilizer and soil applications
Theobromine	Important for certain feed and extraction applications

The buyer and supplier should agree the applicable parameters before the order is confirmed.

For a more detailed discussion of commercial specifications, see our article on [Export-Grade Cocoa Shell Specifications for Industrial Buyers](#).

The figures in a product specification should relate to the actual material being offered and should not simply be copied from another supplier or laboratory report.

5. Why Moisture Matters

Moisture is one of the first parameters a bulk cocoa-shell buyer should consider.

Higher moisture can affect:

- Storage stability
- Transportation economics

- Combustion performance
- Effective energy value
- Handling
- Risk of deterioration during storage

For biomass buyers, moisture can be particularly important because water in the material does not contribute useful combustion energy.

However, the acceptable moisture level should be agreed according to the buyer's application and storage conditions.

Our article [Why Moisture Matters in Agricultural Commodities](#) provides a broader explanation of this issue.

6. Ash Content and Biomass Applications

Ash is another important consideration when cocoa shells are used as biomass fuel.

After combustion, the inorganic portion of the biomass remains as ash.

High ash levels can affect:

- Ash-handling requirements
- Boiler cleaning
- Slagging and fouling considerations
- Disposal requirements
- Overall combustion economics

For this reason, a biomass buyer should not judge cocoa shells only by calorific value.

The complete fuel specification should be considered together with the characteristics and operating requirements of the combustion system.

7. Particle Size and Handling

Particle size can affect how cocoa shells move through:

- Conveyors
- Hoppers
- Feed systems
- Grinding equipment
- Pellet mills
- Briquetting equipment
- Combustion systems

There is no universal particle size suitable for every application.

A buyer should therefore provide the supplier with the required particle-size range where the application depends on material size.

This is particularly important for industrial plants that use automated feeding equipment.

8. Packaging Options for Bulk Export

Cocoa shells can be prepared in different packaging formats depending on the buyer's handling system and shipping arrangement.

Common commercial options may include:

50 kg PP Woven Bags

Suitable where the buyer's warehouse and handling system is designed for bagged cargo.

FIBC / Jumbo Bags

Suitable for buyers equipped to handle large bags using forklifts or other lifting equipment.

Bulk Loading

Bulk container loading with an appropriate liner can be considered where the buyer has suitable unloading and handling facilities.

The packaging method should be agreed before the commercial quotation is finalized.

9. Container Loading

Container loading depends on:

- Product density

Packaging

- Loading method
- Container type
- Applicable road and port weight restrictions
- Carrier requirements

A 40ft high-cube container may be planned around an approximate 18–25 MT loading range for cocoa shells, but the actual quantity should be confirmed against the final packaging and loading arrangement.

Buyers should therefore avoid assuming that every 40ft container will carry exactly the same quantity.

The final packing list and bill of lading should reflect the actual shipment.

10. Sourcing Cocoa Shells from Nigeria

Nigeria has a significant cocoa-producing and cocoa-processing sector, creating opportunities for sourcing cocoa by-products for international markets.

For an international buyer, however, country of origin alone does not establish product suitability.

The buyer should evaluate:

- Product origin
- Supplier identity
- Available quantity
- Specification

Packaging

- Loading arrangement
- Export documentation
- Shipping terms
- Inspection requirements
- Payment terms

Enbri Nig. Ltd. offers cocoa shells of Nigerian origin for bulk export and discusses supply according to buyer requirements, available material and agreed specifications.

For buyers specifically looking for Nigerian cocoa shells, see our [Cocoa Shell Supplier Nigeria](#) page.

11. How International Buyers Should Evaluate a Supplier

Before placing a substantial order, buyers should establish what they are actually buying and how the transaction will be controlled.

A sensible supplier evaluation can include:

Company Verification

Confirm the supplier's legal company identity and contact information.

Product Specification

Request the current commercial specification and compare it with your own requirement.

Origin

Confirm the declared country of origin of the material.

Quantity

Establish whether the supplier can support the required shipment quantity and future supply program.

Packaging

Confirm bag type, bag weight, FIBC requirements or bulk-loading arrangements.

Inspection

Where required, agree whether an independent inspection company or laboratory will inspect or test the shipment.

Shipping

Confirm loading port, destination port, Incoterm and expected shipment period.

Documentation

Agree the documents that will be provided for the transaction.

Our article [7 Things Every International Buyer Should Verify Before Choosing a Cocoa Shell Supplier](#) covers these supplier-evaluation points in greater detail.

12. Laboratory Testing and Independent Inspection

A supplier's general product description should not be treated as a substitute for shipment-specific testing where testing is required.

Depending on the transaction, the buyer may request:

- Independent inspection
- Laboratory analysis
- Pre-shipment inspection
- Loading supervision
- Weight verification
- Quality verification

The testing parameters should be agreed in advance.

For example, a biomass buyer may require moisture, ash and calorific value, while another buyer may require additional parameters.

Enbri Nig. Ltd. does not present one laboratory result as automatically representing every cocoa-shell shipment.

Where independent inspection or laboratory testing is required by the buyer or contract, the applicable arrangement can be discussed before shipment.

This approach gives both parties a clear basis for assessing the cargo.

13. Export Documentation

The exact documents required depend on the transaction, destination country, commodity classification and applicable regulations.

An international shipment may involve documents such as:

- Commercial invoice
- Packing list
- Bill of lading
- Certificate of origin
- Phytosanitary certificate where applicable
- Fumigation certificate where applicable
- Inspection or laboratory documents where required
- Other export or import documentation required by the authorities

The buyer should confirm destination-country requirements before shipment.

For buyers importing into Cambodia, we have prepared a separate guide:

- [How to Import Cocoa Shells from Nigeria to Cambodia: A Practical Guide for Buyers](#)

For buyers considering Vietnam, see our [Cocoa Shell Supplier Vietnam](#) page.

14. Shipping Terms: FOB, CFR and CIF

Cocoa shells can be offered under different commercial arrangements depending on the buyer's requirements.

FOB Nigeria

Under FOB, the buyer generally arranges the main ocean freight after the agreed loading point in accordance with the applicable Incoterms® rules.

This may be suitable for established importers that already have freight arrangements.

CFR Destination

Under CFR, the seller arranges and pays for carriage to the named destination port, while risk transfers according to the applicable Incoterms® rule.

CIF Destination

Under CIF, the seller arranges carriage and insurance to the named destination port, subject to the applicable Incoterms® requirements.

The quotation should clearly state:

- Named place or port
- Incoterm

Quantity

Packaging

- Product specification
- Shipment period
- Costs included
- Costs excluded
- Payment terms

Buyers should compare quotations on the same basis.

For international trade terminology, buyers can consult the International Chamber of Commerce Incoterms® information.

15. Compare Landed Cost, Not Just Product Price

A low FOB price does not necessarily mean a low final cost for the importer.

The buyer should consider the complete landed cost, including applicable:

Product price + ocean freight + insurance where applicable + destination charges + duties/taxes + customs clearance + local handling.

This is especially important when comparing cocoa shells from different origins.

A supplier with a higher FOB price may sometimes produce a more competitive landed cost if the freight, packaging or other commercial conditions are more favourable.

For a useful quotation, a buyer should normally provide:

- Required quantity
- Intended application
- Required specification
- Packaging preference
- Destination port
- Preferred Incoterm
- Target shipment period

16. How Much Cocoa Shell Can Enbri Supply?

Enbri Nig. Ltd. currently discusses commercial supply in the range of approximately 75–150 MT per month, subject to availability, specification and confirmed orders.

Actual supply availability can change according to:

- Material availability
- Buyer specification
- Season
- Packaging requirements
- Shipment schedule
- Confirmed orders

For this reason, available quantity should be confirmed before a purchase order or contract is finalized.

Container-based orders and larger monthly supply programs can be discussed according to the buyer's requirement.

17. Global Applications and Market Outlook

Interest in cocoa shells is connected to the wider development of markets for agricultural by-products and biomass resources.

Potential demand comes from several areas:

Energy

Biomass users continue to evaluate agricultural residues as alternative solid fuels where they fit their equipment and economics.

Agriculture

Cocoa shells may be used as organic material in composting, soil amendments and fertilizer formulations.

Biomaterials

Researchers and manufacturers continue to investigate agricultural residues as feedstocks for biochar, composite materials and other bio-based products.

Extraction

Cocoa-processing by-products contain compounds that may have value for further extraction and processing.

However, demand is not identical across all markets. The commercial opportunity depends on local regulations, freight costs, application requirements, competing raw materials and the economics of processing.

18. What Should a Buyer Ask Before Buying Cocoa Shells?

A serious buyer should be able to answer these questions before confirming an order:

What will the cocoa shells be used for?

What specification does the plant require?

What quantity is required per shipment?

What packaging does the facility accept?

What destination port should be quoted?

Is the quotation FOB, CFR or CIF?

What inspection or laboratory testing is required?

What documents are required at destination?

What payment terms are acceptable to both parties?

These questions can prevent many of the problems that occur when agricultural commodities are purchased only on the basis of price.

19. Requesting a Cocoa Shell Quotation from Nigeria

A buyer does not need to send a complicated enquiry.

A useful enquiry can look like this:

- Product: Cocoa shells

- Quantity: 100 MT
- Application: Biomass fuel
- Destination: Sihanoukville
- Packaging: FIBC / Jumbo bags
- Terms: CFR
- Shipment: Required shipment period
- Specification: Buyer's required parameters

With this information, the supplier can assess the requirement and prepare a more meaningful commercial offer.

For buyers who need help evaluating the procurement process, see our guide on [How to Import Cocoa Shells from Nigeria: A Step-by-Step Guide for International Buyers](#).

Frequently Asked Questions

Are cocoa shells the same as cocoa husks?

The terminology can vary between markets and suppliers. Buyers should confirm exactly what material is being offered and how it is produced before purchasing.

What are cocoa shells used for?

They can be considered for biomass fuel, boiler applications, pellet and briquette production, composting, soil amendments, biochar and some research or extraction applications.

Are cocoa shells suitable for biomass fuel?

They can be suitable for some biomass applications, but suitability depends on the fuel characteristics and the buyer's equipment. Moisture, ash, calorific value and particle size should be considered.

Can cocoa shells be used for fertilizer?

They can be incorporated into composting and some fertilizer or soil-amendment formulations. The material should be evaluated according to the requirements of the finished product.

Can cocoa shells be used for animal feed?

Cocoa shells have been investigated for feed applications, but feed manufacturers should assess parameters such as theobromine, contaminants, nutritional composition and applicable regulations before use.

Can I buy cocoa shells from Nigeria?

Yes. Nigerian-origin cocoa shells can be considered as a sourcing option for international buyers, subject to availability, specification, shipping and destination requirements.

Does Enbri provide laboratory testing?

Where laboratory testing or independent inspection is required by the buyer or contract, the applicable testing arrangement can be discussed before shipment. Testing should be based on the agreed specification for the transaction.

How much cocoa shell can Enbri supply?

Current commercial supply is approximately 75–150 MT per month, subject to availability, specification and confirmed orders.

Can Enbri quote FOB or CFR/CIF?

Yes. Commercial quotations can be discussed according to the quantity, packaging, destination, shipment period and agreed trade terms.

Conclusion

Cocoa shells are no longer simply a waste material from cocoa processing. They can have commercial value across biomass energy, agriculture, composting, pellet production, biochar and other industrial applications.

But the right way to buy cocoa shells is not to start with a generic specification or the cheapest price.

The buyer should first establish the intended application, define the required specification, confirm packaging and quantity, check the applicable export and import documentation, and agree the inspection and shipping arrangements before loading.

For international buyers considering Nigerian origin, Enbri Nig. Ltd. offers cocoa shells for bulk export and discusses supply according to buyer requirements, available material and agreed specifications.

If you are sourcing cocoa shells from Nigeria, send us your required quantity, intended application, specification and destination port and we can discuss the appropriate commercial and shipping option.

Enbri Nig. Ltd.

- Benin City, Edo State, Nigeria
- Procurement: +234 913 783 4286
- Email: info@enbrinigltd.com.ng