CNSL extraction

Taking out a valuable product from cashew shell

Features:

- The most efficient and intelligent way to extract value from shell is to separate the oil
- Cashew Nut Shell Liquid (CNSL) is a non-edible oil
- Main uses: resin for paints and varnishes, friction materials, fuel in burners
- Market value on export: 350 to 450 USD/Mt

Technology and process:

- Technical CNSL yield is around 20%
- Mechanical extraction (expelling) starting at 5,000 Mt RCN equivalent
- Shells from several cashew processing units can be processed in one single extraction unit

Shell cake for fuel

Rich biofuel, good for boilers and power generators

Features:

- **Smokeless, and not corrosive for the boiler**. The very low oil content of shell cake makes it more suitable for solid fuel boilers than "raw" cashew shells
- **Market value** as solid fuel: 10-20 USD/Mt (5600-11000 CFA/Mt)

Technology and process:

- Shell cake for **thermal power**: automatic feeding of boiler ensures smooth steam production
- Technology for **electricity production** depends on the shell cake feedstock available:

	Power generation	Starting at (Mt RCN equivalent)	Features
Steam engine	>30 kW	1,000	Adaptable to low charges
Gasifier	> 200 kW	3,000	Can feed diesel power generator in dual fuel mode
Turbine	> 500 kW	8,000	24/24 power generation

We offer:

- **Capacity building** in
  - **Quality assessment CNSL** the devices (H2CP and charcoal reactor)
  - **Operation** and best safety practices for CNSL extraction and small power plant
  - **Marketing** products & by-products
- **Commissioning & set up** of technologies for CNSL extraction, shell cake valorization, and more
- Reactive **technical support** and maintenance

Calculate your by-product potential with

CashuCalculator

Online tool available at

https://cashucalculator.away4africa.nl/

Wim Simonse, ***Away4Africa***
w.simonse@away4africa.nl
Julia Artigas, ***Fúnteni Installations et Conseil***
jartsan@funteni.com

www.away4africa.nl

Away4Africa

fúnteni

What if we told you that…

…your shell waste is a source of clean energy and revenue?

Discover the best practices for shell management in **big-scale cashew factories**: