



# African bush milk

## *Euphorbia tirucalli*

### About me:

I am a medium-sized shrub, with succulent smooth branches, typically found in whorls. I have very few leaves, only on the tips of my branches. My branches, roots and stem contain a white sap (latex) which is extremely poisonous but can be used to produce energy. I grow best in semi-arid habitats and can tolerate elevated temperatures and a variety of soil types

**Where do I come from?** I originate from North-eastern, central and southern Africa (Angola, Eritrea, Ethiopia, Kenya, Malawi, Mauritius, Rwanda, Senegal, Sudan, Tanzania, Uganda, Zanzibar).

### How is the bio-fuel produced?

This plant falls into group of hydrocarbon plants. The hydrocarbons produced within the plants called *terpenoids* are very similar to petroleum. The latex is processed to separate the oil containing hydrocarbon from the latex. The hydrocarbons then undergo cracking (separation of large hydrocarbons into smaller more useful hydrocarbons) to form high octane bio-gasoline. Bio-gas (methane) can also be produced from *E.tirucalli*'s sugar and cellulose via fermentation.

### How is my energy used?

- Direct combustion (charcoal and briquettes can be used for cooking and heating)
- Electricity- bio-gas can be used for generation
- Bio-gasoline can be used in adapted cars.



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Image taken by Tony Rodd (2010) New South  
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