



# Cassava

*Manihot esculenta*

## About me:

I am a small woody shrub, with large glossy green leaves. I grow in most soils and environments especially in the tropics and arid regions of Africa as I am well adapted to drought. I am cultivated for my roots which are very long and full of nutrients. I am a very important food crop for many communities around the world.

## Where do I come from?

I originally came from Brazil, Paraguay and Argentina.

## How is the bio-fuel produced?

The plant material (leaves and stems) discarded after the cassava harvest have a high amount of biomass. Firstly the plant material (biomass) is crushed and has a pre treatment phase which separates the lignin, cellulose and hemicelluloses using enzymes. Once this process has been completed the biomass is then fermented using yeast and distilled to remove any excess water. Lastly it is refined to produce bio-ethanol. This sustainable method could not only benefit the local livelihoods but also contribute to the reduction of green house gases (GHG).

## How is my energy used?

The ethanol can be converted into combustible fuel for cars.



Image taken by International Institute of Tropical Agriculture



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Image taken by Tom Rulkens



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