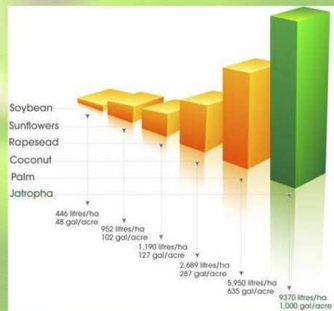
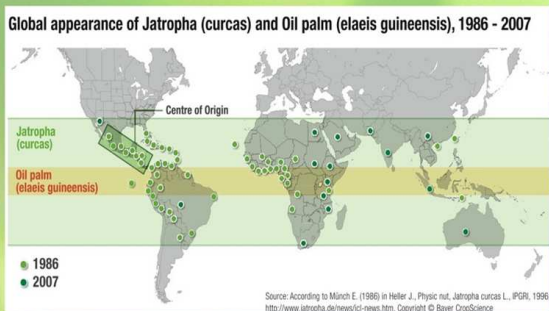


Domestication and Biotechnological Improvement of *Jatropha curcas*

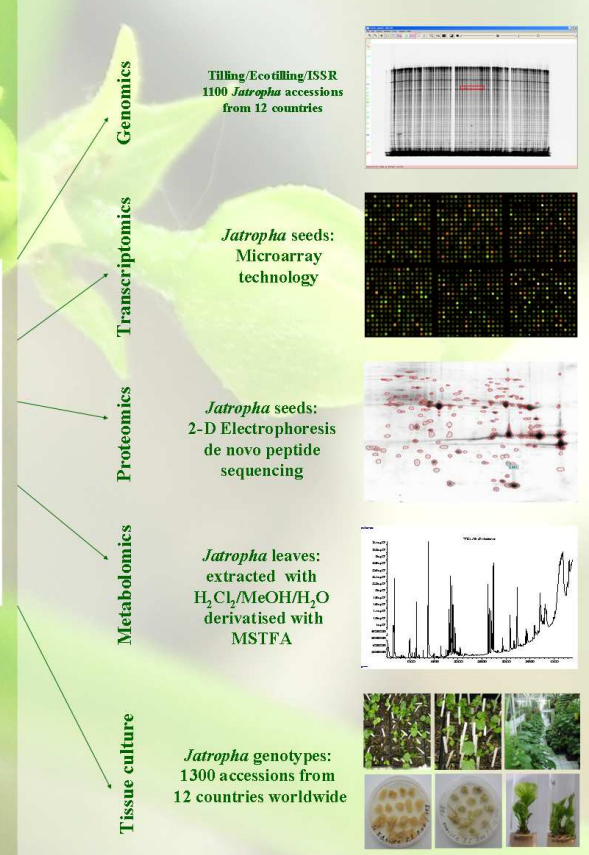
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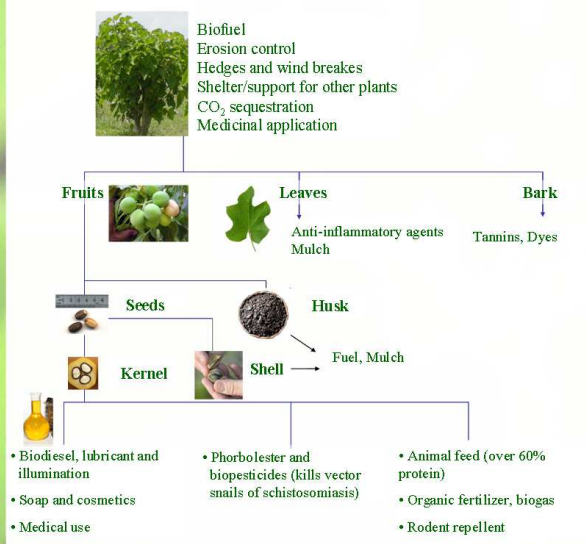
This species of the family *Euphorbiaceae* has gained attention as alternative bioenergy plant worldwide in tropical and subtropical areas for the production of biodiesel. *Jatropha* can be planted on poor, contaminated soils which are not suitable for food production. *Jatropha* is also used in plantations of hedges and barriers to soil erosion. Furthermore *Jatropha* is used as source of fuel wood, for the production lamp oil, soap, colors and smear oils and for some medicinal applications.



Jatropha curcas – Functional Genomics



Jatropha curcas – a plant with multiple uses



The identification and elimination of pathogens is addressed with novel biotechnological methods, since new plantations of *Jatropha* should be planted using healthy planting material.

An *in vitro* germplasm collection was established, to conserve the valuable genetic resources. For the purpose of molecular characterization of valuable accessions marker technologies with high precision were developed.

Functional genomics allow to assign not yet identified genetic sequences to traits of interest for the breeder.

Due to the non-domesticated state of *Jatropha* the development of cultivars with conventional methods today would represent a long lasting undertaking. The gene bank also provides the starting material for genetic improvement with emphasis on different breeding goals by molecular breeding.