

Jatropha curcas evaluation, breeding and propagation programme (JEP)



www.jatropha.wur.nl

The *Jatropha curcas* evaluation, breeding and propagation programme (JEP) is carried out by Wageningen University and Research centre, Plant Research International, the Netherlands.

Rationale

Jatropha curcas is a multi-purpose tree, growing naturally in countries of the equatorial Americas, whereas it has been spread to other tropical countries as well. *Jatropha* seeds are rich in oil and when extracted, pure plant oil can be used directly or as biodiesel in engines.

For this reason, *Jatropha curcas* is an attractive crop and it is being introduced rapidly in various rural programmes, as it may contribute to rural development by income generation and increasing the efficiency of rural and agricultural processes.

However, *Jatropha curcas* production varies greatly and profitable claims are made without well-founded proof nor with reliable sources of information. Being an uncultivated wild-species, it is not known what the environmental and the genetic influence is on oilseed production.

This information is critical to increase the chances of *Jatropha curcas* development programs with appropriate knowledge on how to cultivate what line of *Jatropha curcas* under which environmental and agronomic conditions.

Objective

The objective of this programme is to minimize risks involved in the introduction of *Jatropha curcas* as oil producing crop in developing countries, where it concerns productivity in relation to environmental settings and crop management.

Approach

Cultivated and wild-lines of *Jatropha curcas* are collected globally with associated 'passport data'. The required data include information on productivity, oil contents, growth conditions, agronomic practices, propagation methods and sensitivity to pests and diseases.

Living gene pools are maintained in their originating countries. Young leaf and seed material is sampled from natural and commercial *Jatropha curcas* stands. Analysis of these data allows distinguishing more or less promising lines in relation to their growing environments. Finger-printing of the collected material and some preliminary research using biotechnological approaches will prepare for future breeding and propagation programmes. Cross-breeding and agronomic experiments will be initiated with selected lines.

Programme duration and reach

This first phase of the *Jatropha curcas* evaluation, breeding and propagation programme runs from 2006 until 2010. The programme is embedded in a larger framework of stakeholders dealing with all aspects of renewable energy and is not restricted to agronomic production goals only.

Participation

The *Jatropha curcas* evaluation, breeding and propagation programme is open for participation. You can supply information on your *Jatropha curcas* collection through a questionnaire and by supplying young leaf material that will be integrated in the various analyses. We will provide feed-back on the analysis results of your *Jatropha curcas* collection and update you on the project progress and on special events, such as stakeholder workshops and new initiatives that you may want to participate in. Overall project findings will be made publicly available.

Participate with your *Jatropha curcas* collection: contribute and benefit with this world wide evaluation programme!

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To participate in the evaluation programme, you may contact the project team for a leaf material collection kit and for instructions on filling out the questionnaire. Your information is crucial for a well-founded global analysis of *Jatropha curcas*.

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