

# Integrated Utilization of the Jatropha Plant

**Central hypothesis: The Jatropha System creates a positive correlation between energy production and food production**

i. e. the more energy Jatropha hedges produce, the more food crops are protected from animals and erosion. Also additional income is created, mainly for women.

## Erosion Control

Erosion control through planting of Jatropha hedges and stabilizing small dams



- Living fences
- Improvement of soil fertility
- Improved fallow
- Reduction of wind and water erosion
- Increase of hedge length in expectation of economic profit

## Promotion of Women

Improvement of the working conditions of women (grain-mills) and income (soap production) through utilization of the Jatropha plant



- Facilitation of soap production
- Strengthening of economic independency of women
- Payment of milling costs through Jatropha seed sales

## Jatropha curcas L.

The Jatropha plant is used as a living fence around gardens and fields, since it is not consumed by animals



- Yield of oil: 0,2 l per kg of seeds
- Production: 1 kg seeds per meter of hedge per year
- Existence of Jatropha in Mali: about 10.000 km protection hedges
- Insecticidal and molluscicidal factors in the seeds

## Poverty Reduction

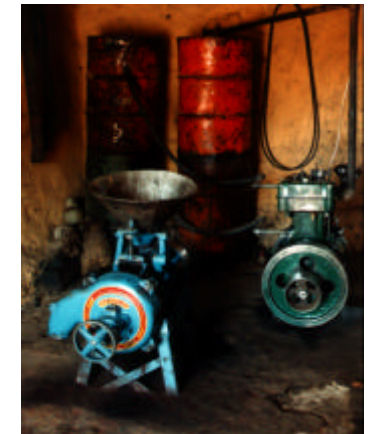
Creation of income in rural areas through use of Jatropha oil as fuel and as raw material for soap production



- Sale of Jatropha seeds
- Improvement of rural income
- Reduction of cash drain from rural to urban areas
- Protection of food crops against gazing animals

## Renewable Energy

Production and use of Jatropha oil as fuel in stationary engines



- Plant oil engines
- Substitution of diesel by Jatropha oil
- Energy production in rural areas
- Rural mechanisation