

## How TaTEDO can help you?

TaTEDO is a sustainable modern energy services development organization with the aim of providing among others, the following services in relation to *Jatropha production and use*.

- Promote production of *Jatropha* seeds with the aim of:
  - Increasing income for farmers.
  - Assuring that oil produced from *Jatropha* is used as cooking fuel in villages, and also as an alternative source of electricity generation.
  - Reducing dependency on imported fuels.
  - Conserving the environment.
- Provide technical services on different ways of growing and processing *Jatropha*.
- Link farmers with commercial buyers.
- Provide technical services and training on electricity generation using *Jatropha* oil.
- Provide technical know-how on bio-diesel production from *Jatropha* oil.
- Provide enterprise development services in *Jatropha* energy systems and industries.



TaTEDO Technician teaching Engaruka villagers MFP operator

## About TaTEDO

TaTEDO is a sustainable modern energy national development NGO based in Dar es Salaam, Tanzania with more than 15 years actively involved in the sustainable modern energy development projects and programmes in the rural areas.

### Vision

Poverty free and self-reliant communities in Tanzania accessing sustainable modern energy services

### Mission

Advancing popular access to sustainable modern energy technologies in marginalized communities in Tanzania, through technological adaptations, capacity building, community mobilization and advocacy for increased access to sustainable energy

### Goals

The goals of TaTEDO are to:

- Improve quality of life of Tanzanians by contributing to availability of improved and sustainable modern energy services, employment and income generating opportunities, which are essential for poverty reduction,
- Reduce environmental degradation resulting from increased use of wood and fossil fuels,
- Assist the country to reduce dependence on imported energy.

### Contact information;

Program Manager  
TaTEDO  
S. L. P. 32794,  
Dar es Salaam, Tanzania.

Telephone: 022-2700771/2700438,  
Fax: 255-22-2774400,  
Email: [energy@tatedo.org](mailto:energy@tatedo.org)  
Website: [www.tatedo.org](http://www.tatedo.org)

We are off-Bagamoyo Road along Shekilango Road, near to Institute of Social Works, Kijitonyama, Dar es Salaam.

## Tanzania Traditional Energy Development and Environment Organisation (TaTEDO)



### BRIEF ON JATROPHA



*Jatropha* fruits and seeds

***Jatropha* oil should be used to meet local energy needs before considering export demand**

### Promote *Jatropha* farming for:

- Income and Employment generation
- Providing alternative energy for powering engines
- Decreasing deforestation
- Increasing soil fertility
- Decreasing soil erosion
- Creating employment.

## Why Jatropha Farming?

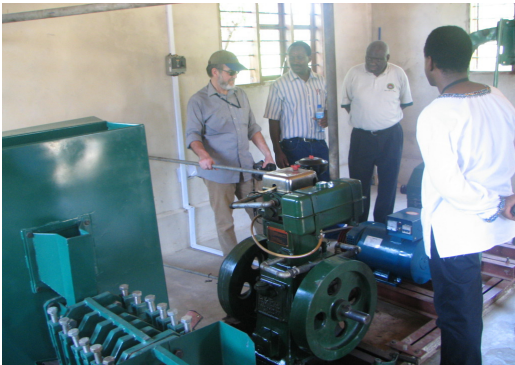
*Jatropha* farming is a potential source of income. There is a high market demand for *Jatropha* seeds and oil inside and outside the country. Pressed *Jatropha* seeds produce oil, which could be used as follows: -

- Powering a variety of engines such as those of cars, Multifunctional Platforms (MFPs), etc. MFPs can be used to generate electricity in off grid remote rural areas. *Jatropha* oil could also be used for making soaps, cosmetics, medicines and candles.



Oil from *Jatropha* seeds

- For meeting household energy needs, such as cooking and lighting through special stoves and lamps respectively.
- For improving soil fertility, since seeds cake have a higher concentration of nitrogen, phosphorus and potassium.



A multifunctional platform that generates electricity using *Jatropha* oil at TaTEDO Centre, Mbezi-Juu

Also:-

- *Jatropha* trees are drought resistance as such could grow in arid and semi-arid areas.
- *Jatropha* trees forms a good hedge, and dislocating free-range domesticated animals in unwanted areas, due to their repellent smell
- *Jatropha* trees are good for soil erosion protection.
- *Jatropha* trees are good in conserving soil fertility especially in intercropping and agro forestry farming

## How is *Jatropha* tree grown?

*Jatropha* can either be planted using seeds, seedlings or cuttings.



Drying *Jatropha* seeds

### Plant through seeds /direct sowing

Preparation of seeds for growing can start by finding healthy seeds, which are large, mature, and not more than six months old from the harvesting period.

Seeds should be sowed during the long-term rain seasons. The depth of pit for sowing *Jatropha* seeds should be 2 to 3 centimetres. If the farmer is growing *Jatropha* for commercial purposes, it is good if the spacing is 2x2 metres. In other ways, it is recommended that the spacing should be 2.5x2.5 to 3x3 metres. If trees will grow well, the yield is expected in a period of one to one and a half years.

### Planting through seedlings

Planting *Jatropha* seedlings should start by preparing compost, (by mixing organic soil from the forest and normal farm soil). It should be prepared three months before the onset of rain season. The compost should be put in polythene bags followed by growing one seed in each bag. Within three months period, seedlings should be ready for planting. The depth of pits for planting seedlings should be 20 cm.

### Growing from cuttings

*Jatropha* cuttings are taken from trees at the time when they are more than one year. When cuttings are needed for commercial farming, it is recommended that, they should not be very old because the harvest will be less than expected. Cuttings could be 60 cm to 120 cm long. Trees that are planted from cuttings usually bear fruit faster than those planted from seeds and seedlings.

## Taking care of *Jatropha* plant in the field

- When *Jatropha* plants are very small, it is important to do weeding, once or twice a year.
- When seedlings are very small it is important to do watering depending on the weather in a given area.
- *Jatropha* tree performs well in natural organic manure.
- Pruning is essential in the first year when the plant is 40-60 cm high, this should be repeated in the second and the third year, while ensuring that plants stay in the appropriate shape and height.(depending on weather)
- *Jatropha* tree has high resistance to diseases although a



Young Fence of *Jatropha* trees

few insects can attack its leaves. The best natural way of combating the problem is by using cow's urine, small hot papers (pilipili kichaa), neem oil or other

- fluid concentrates from neem tree, (muarobaini).
- Fruits normally mature within 2 to 4 months from the time a plant gives out fruits. When fruits mature, they change from green towards yellow and finally into a black colour. From the 2<sup>nd</sup> to 10<sup>th</sup> year. The average amount of harvest ranges from 0.5 to 10 tons per hectare.



*Jatropha* fruits and seeds