

Come let us join hands  
to build the **fuel of the future**



Fossil fuels have become increasingly expensive and are the single biggest drain on the foreign exchange reserves of India, besides leaving behind greenhouse gas emissions.

According to the Ministry of Petroleum and Natural Gas, petroleum consumption is projected to touch 175 million metric tonnes (MMT) by 2006-07.

Now is the time to invest in renewable energy sources and reap the benefits of the new driving force – Bio-diesel.



## Bio-diesel – Future Perfect

There is a huge potential in Bio-diesel arena for an Indian farmer. The important fact is that diesel forms nearly 40% of the energy consumed in the form of hydrocarbon fuels. Its demand is estimated at 40 million tons. This demand can be met through Bio-diesel as an alternative fuel. Bio-diesel can be 'harvested' and is an inevitable alternative to fossil fuel. The advantages of Bio-diesel are:

- It is a substitute or an additive to diesel fuel
- It is environmentally safe, renewable and a natural fuel
- It is derived from the oils and fats of plants, like Sunflower, Rapeseed or Jatropha.
- As an alternative fuel for diesel engines, it serves as an equal energy source.
- It is a domestically produced liquid fuel that can help reduce the country's dependence on foreign oil imports.

## Many Options, One Solution – Jatropha

Jatropha Curcas is the most suitable Tree Borne Oilseed (TBO) for production of bio-diesel in India. This plant can survive on any soil type found in the country and needs minimal input or management. It can be propagated easily and can withstand long periods of drought. While the plant starts yielding in the very first year, stable commercial yield levels can be attained from the third year under favourable conditions and continues for 25-30 years.

Further, there are various activities in the vertical chain like raising nurseries, planting, maintaining, and primary processing, which are all labour intensive and can generate employment on a large scale. Solvent and oil extraction plants located near raw material sourcing are also an excellent source of revenue and employment in every region. Bio-diesel obtained from Jatropha can be used for transport vehicles, generators, railway engines, and irrigation pumps.

The advantages of Jatropha cultivation are:

- High oil content
- Requires a lesser quantity of water and input
- Can be cultivated on most types of soils under varied climatic conditions
- Can be cultivated in both low and high rainfall areas
- Quick yields even under adverse land conditions
- Small tree size allows easy collection of seeds

Criteria for high yield cultivation

Jatropha survives in most types of soil and climatic conditions, but to get high yield, you need well drained soils devoid of water logging. Frost and prolonged minimum temperature below 10°C is not a favourable condition. Also, you need:

- Irrigation during critical stages for multiple flushes.
- Potential yields of 10-15 tonnes/Ha are achievable under ideal conditions.
- Nitrogen, Phosphorous and Potash of about 100:50:50 Kg per hectare.
- 4-5 protective pesticide sprays per annum

## Intercropping – Reap the benefit of two

You can benefit tremendously from growing another crop along with Jatropha as an additional revenue source. That is why we call Jatropha your insurance crop:

- Reduce the risk of dependence on one crop
- Steady and uniform flow of revenue
- Greater flexibility in the distribution of labor
- Recover investments within a shorter time frame
- Produce a variety of useful by-products
- Promote assured returns on barren lands



## Reliance Towards a profitable partnership

Reliance is aiming to promote good cultivation practices for Jatropha so that the crop can produce high-quality fuel and help you benefit. By associating with Reliance, you not only benefit from good methods of cultivation but can also get 100 percent return on investment and more. We are committed to the welfare of the farming community and will strive to provide many value additions like:

- Best quality planting material for optimal yields
- Providing support on agronomic and other practices
- Channelling input placement and other development efforts
- Collection centres in the vicinity
- Guaranteed minimum base price
- Assured forward linkage for entire produce
- Support in improving soil and water conservation measures, and other land use issues
- Support on inter crop and forward linkage
- Enable micro finance linkage through Banks to facilitate credit requirement of farmers

For more details, please call  
Sudarshan on 09867610195 or Vamsee on 09949217042

Reliance Life Sciences Pvt. Ltd.

Dhirubhai Ambani Life Sciences Centre, Thane-Belapur Road, Rabale, Navi Mumbai 400 701, INDIA.  
Tel: (Board) +91 22 3911 8000 • Fax: +91 22 39118099 • Email: biofuels@relbio.com

[www.relbio.com](http://www.relbio.com)