About Jatropha Curcas

Jatropha Curcas is a non edible oil crop predominately used to produce bio-diesel.

In addition to bio-diesel production, the by-product of Jatropha Curcas' trans-esterification process can be used to make a wide range of products including high quality paper, energy pellets, soap, cosmetics, toothpaste, embalming fluid, pipe joint cement, cough medicine and as a moistening agent in tobacco.

The Jatropha Curcas seed cake which is the waste by-product of the bio-diesel trans-esterification process can be used as a rich organic fertilizer.

Jatropha Curcas grows best on well drained soils (pref PH 6-9) with good aeration but is well adapted to marginal soils with low nutrient content.
**Jatropha Curcas** grows well with more than 600mm rainfall per year and it can withstand long periods of drought. The plant sheds its leaves during a prolonged dry season.

**Jatropha Curcas** prefers temperatures averaging 20-28 degrees Celsius (68-85 degrees Fahrenheit). It can, however, withstand a very light frost which causes it to lose all its leaves and may produce a sharp decline in seed yield.

One tonne of **Jatropha Curcas seeds** will produce up to 600 litres of biodiesel with proper management.

Recommended planting rates of **Jatropha Curcas** are 2,000 / 2,500 plants per hectare (2.5 acres)

One person can professionally plant, manage and harvest 5-8 hectares of Jatropha Curcas.

30kg of **Jatropha Curcas** fruit can be harvested per person, per hour.
Jatropha Curcas seeds can produce 60% oil content depending on:

- Production capacity (genetics) of the plants
- Application of advanced pruning techniques
- The moisture level of the soil
- The nutrient level of the soil
- Application of foliar fertilizer 30 days before harvest
- Stage of ripening at harvest
- Use of high quality processing equipment
- Processing completed within 24 hours of harvest
About Jatropha Curcas Plantations

Based in Thailand, **Jatropha Curcas Plantations** is a division of Palm Plantations Of Australia, dedicated to the continued genetic improvement of the **Jatropha Curcas** species and has been an integration of our palm and horticultural business established in Thailand more than 12 years ago.

Palm Plantations of Australia Managing Director Neville Burman has been involved in Agriculture and Horticulture for over 30 years. He has a particular interest in the application of new technology and innovation in the improvement of soil fertility and genetics, and the critical role this has to play, in the improvement of overall plantation productivity.

We supply high yielding **Jatropha Curcas Seeds**, seedlings and consulting services to companies establishing Jatropha plantations in more than 20 countries throughout the world.

Jatropha Curcas Plantations also assists companies in achieving the highest financial returns not only by using our **high yielding Jatropha Curcas seed** but also thru advanced technology in nursery establishment, crop management as well as pruning and harvesting techniques.

**Jatropha Investment / Turnkey Plantations**

We can also provide Jatropha Curcas & Biofuel project investment opportunities and offer turnkey plantation establishment and management for the production of Jatropha feedstock.
Our Jatropha Curcas Consulting services include:

- Plantation Consulting
- Soil testing and audit
- Site Inspection / Assessment
- Nursery Establishment and Management
- Plantation Establishment and Management (including advanced pruning techniques)
- Financial Feasibility study (capital, running costs, cash-flow projections)
- Advanced Jatropha pruning / harvesting techniques
- Enhancing production in presently poorly producing plantations
- Location and assessment of profitable biofuel investment projects
- Development of Jatropha biofuel, biomass, and renewable energy strategies
Jatropha Curcas Seeds

Our Superior high yielding Jatropha Curcas seeds will:

- Reach first harvest within 6 months with full production in their 5th year
- Have a life-span of 60 years, while producing seed for up to 50 years
- Be freshly harvested and professionally packed & shipped
- Exceed guaranteed 90% germination rate
- Produce fruit with high oil content (60%) - with proper management
- Have selected genetics from plants that have produced over 10 Tonnes of Oil per Hectare, per Year. (10 - 15kgs per tree at maturity)

Seed production of our high yielding Jatropha Curcas seeds

With correct management, soil and plant nutrition along with adequate moisture our seeds will achieve the following yields planted at 2,500 plants/Ha

- Year 1 - 3kg/tree
- Year 2 - 6kg/tree
- Year 3 - 9kg/tree
- Year 4 - 10-12kg/tree
- Year 5 - 10-15kg/tree
## Jatropha Curcas Seed Pricelist
(about 1000 seeds / Kg)

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Area (Hectares)</th>
<th>Price USD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>10kg sample</td>
<td>4</td>
<td>$700 inc. DHL</td>
</tr>
<tr>
<td>25kg sample</td>
<td>10</td>
<td>$850 inc. DHL = R0.34/ seed</td>
</tr>
<tr>
<td>1,000kg</td>
<td>400</td>
<td>$2,000 FOB</td>
</tr>
<tr>
<td>5,000kg</td>
<td>2,000</td>
<td>$9,000 FOB = R0.018/seed</td>
</tr>
<tr>
<td>10,000kg</td>
<td>4,000</td>
<td>$17,500 FOB</td>
</tr>
<tr>
<td>20,000kg</td>
<td>8,000</td>
<td>$30,000 FOB</td>
</tr>
<tr>
<td>25,000kg</td>
<td>10,000</td>
<td>$31,250 FOB</td>
</tr>
</tbody>
</table>

Above plant area is based on:

- Our minimum 90% germination rate
- Planting 2,500 trees per hectare (2 X 2 metre spacing)
- 1kg of our seed contains a minimum 1,100 seeds

You can [order online](#) sample quantities of up to 25,000 Jatropha Curcas seeds.

## Jatropha Curcas Propogation and Cultivation

**The advantage of Jatropha Curcas seeds over Jatropha curcas cuttings**

Jatropha Curcas grows readily from seeds or cuttings. However trees propagated from cuttings have a shorter productive lifespan and lower drought/disease resistance than plants propagated from seed.

Also, Jatropha Curcas trees produced from cuttings do not produce true taproots. Instead, they produce pseudo-taproots (surface roots) that may penetrate much less than half the depth of soil as taproots produced on trees grown from seed.
Note: This year’s cold weather in China completely killed all Jatropha Curcas plants propagated from cuttings. Only those that were propagated from seeds with a true tap root survived the frost.

Achieving Outstanding Jatropha Curcas production
**Jatropha Curcas** plants inoculated with MYCORRHIZAE will likely survive stressful conditions and give higher yields since the Funghi increases the volume of roots hence increasing drought tolerance of plants by facilitating the transport of moisture to and within the root system. The uptake of other nutrients essential for plant growth is also facilitated by mycorrhizae, and it has the ability to convert normally unavailable forms of Phosphorous to forms available for plant uptake.

**Jatropha Plantation Carbon Credits**

The addition of Mycorrhizae fungi to the Jatropha plant assists the absorption of carbon into the soil and thereby assists in qualifying a Jatropha plantation for Carbon Credits.

⚠️ Please Note: Due to current worldwide demand for establishment of plantations for sustainable renewable energy we are seeing supply of high quality seed diminish very quickly.
Turnkey Jatropha Plantation & Biodiesel Investment

In addition to the operation of our own Jatropha plantations and consulting services we also offer full turnkey Jatropha Plantation establishment and specialised ongoing management services.

Aimed at Investment groups we can lead the planning, development and ongoing management of a Jatropha plantation and related Bio-Diesel production facilities in an end-to-end manor.

- Turnkey Establishment & Management Of Jatropha Curcas Plantations Include:
  - Initial Soil testing and audit
  - Site Inspection / Assessment
  - Nursery Establishment and Management
  - Plantation Establishment and Management (including application of advanced pruning techniques)
  - Financial Feasibility study (capital, running costs, cash-flow projections)
  - Advanced Jatropha pruning / harvesting techniques
  - Location and assessment of profitable biofuel investment projects
  - Development of Bio-Diesel Refinery & Production facilities

Outlined below is an example financial / yield model achievable using our High yielding Jatropha curcas seeds as well as superior plantation establishment and management services.
ESTIMATED JATROPHA PLANTING COSTS

Cost of planting is approximately $1,000 per hectare (including labour) if land is already cleared. (More in USA).

Cost of annual running expenses including harvesting/Ha $800 (more in USA) Count on 1 person manually fully handling 5-8 Hectares

ACHIEVABLE JATROPHA YIELDS - Based on 2,500 plants per hectare

Beginning to yield after 6 months

- 1st year seed yield/Ha 6,000kg
- 2nd year seed yield/Ha 12,000Kg
- 3rd year seed yield/Ha 18,000Kg
- 4th year seed yield/Ha 20,000Kg
- 5th+ year seed yield/Ha 24,000Kg

The plant has a known economic lifespan of over 40 years without replanting. There are many examples of trees over 60 years producing more than 120kg of seed, per year.

JATROPHA OIL / BIODIESEL PRODUCTION VALUE

1,000Kg of seed can produce (based on 50% oil recovery per seed):

- 500 Litres of Bio Diesel (est. USD$500)
- 100 Litres of Glycerine (USD$200)
- 400kg of Seed cake - Biomass (USD$50)
- Total: USD$750 per 1000kg seed

JATROPHA SEED PRODUCTION FOR FURTHER PLANTATIONS

These figures do not account for selling the seed for propagation of new plantations at USD$2,500/tonne.
JATROPHA PLANTATION BIOMASS

At maturity you can sell 15 tonne /Ha of Biomass from leaves and prunings for USD$3,000ha/yr Alternatively, there is also the potential of harvesting up to 70 tonne of Biomass/Ha from the whole plant annually.

The above model is based management practices and superior grade seed which we have been producing in Thailand for over 10 years.

These Figures do not account for any Land Rental and all returns are based on countries that have a labour cost of USD$150/Month, Adequate rainfall, Adequate temperature and days of sunlight and adequate base soil nutrient levels.
Bharat Petroleum to invest Rs 2131 cr in jatropha bio-diesel project

Lucknow: Bharat Renewable Energy, a subsidiary of state-owned oil company Bharat Petroleum Corp (BPCL), will invest Rs 2,131 crore in a bio-diesel project in Uttar Pradesh, a senior official said.

Move to plant and process jatropha in Sarawak, Malaysia

KUCHING: Local company Passion Masters Resources Sdn Bhd, in collaboration with Dr Luhat Technology Institute, is embarking on a jatropha plantation and processing facility in the Sarawak Corridor of

SG Biofuels to develop jatropha

A group of energy, biotechnology, and agribusiness people have formed SG Biofuels, a plant oil company based in San Diego, Calif. specializing in the development of jatropha as a low-cost, sustainable

Green Gold Energies Opens Its First Jatropha Biodiesel Refinery

Green Gold Ray Energies, Inc. announced today that its biodiesel refinery in Nasipit Port, Agusan del Norte will be opened in the next 90 days. Below is the perspective view of the GRYE Processing &

Biofuel Maker Sirona to Switch From Deep-Fat Fryers to Jatropha

Sirona Fuels claims it can make cheap biodiesel with fixed-price agreements for jatropha with farmers in Haiti, India and other emerging nations. Sirona Fuels wants to move from the fryer to the f

Time Magazine: Jatropha The Next Big Biofuel?

Renewable energy, it turns out, does grow on trees. The fruit pods plucked from jatropha trees have seeds that produce clean-burning diesel fuel. But unlike corn and other biofuel sources, the jatroph
Time to give jatropha a serious thought

JATROPHA, previously a neglected oilseed crop, has become the latest rage among global alternative energy corporations, given its tremendous potential as a viable and "cheapest" feedstock for biodies

Noczim Steps Up Jatropha Production in Zimbabwe

The National Oil Company of Zimbabwe has intensified efforts to boost jatropha production by targeting to plant at least 65 000 hectares and engaging more contract farmers. In a statement, the nat

Crude oil is cheap but some bet high on Jatropha

CALIFORNIA: The fact that crude prices have fallen hasn't deterred those nations looking for cleaner, greener alternatives to fossil fuels. According to a study by University of Wisconsin-Madison, Ne

Jatropha: the answer to oil woes in Uganda

As the volatile Middle East continues to affect global oil supply, countries like Uganda are chocking on heavy oil import costs. Crude fossil oil prices touched $100 (sh171,000) per barrel this year

Jatropha: the future of biofuel?

We've seen researchers turning algae into oil, corn to ethanol and even waste streams into a variety of fuels. But so far, any "miracle" biomass is short on practicality and heavy on hype. Algae d

Two jatropha biodiesel plants open in Guatemala

A Food for Progress project led by Texas A&M University's Norman Borlaug Institute for International Agriculture has led to the development of two biodiesel production plants along the western coast

Ghana biodiesel producer to supply utility for Chilean jatropha oil

Gold Star Biofuels, a Goldstar Farms Ltd. company based in Ghana, has announced it has secured a contract to build small facilities throughout Chile to produce a combined total capacity of 77 MMgy of
**UC Davis tests jatropha for Chevron**

Researchers at the University of California, Davis, are growing jatropha at three locations in California to test how the biodiesel feedstock fares in California's varied climates. According to Sham

**General Motors to sign pact with CSMCRI for Jatropha cultivation**

Ahmedabad: After the successful first phase trial run of bio-diesel blended fuel, auto major General Motors is likely to sign an agreement with Bhavnagar based Central Salt and Marine Chemical Resear

**Air New Zealand successfully conducts first biofuel test flight**

Air New Zealand's two-hour test flight of a second generation new biofuel was successfully conducted above Auckland on Tuesday. A Boeing 747-400 took off at 11:30 a.m. local time (2230 GMT Monday

**Air New Zealand Jatropha biofuel flight takes to the skies**

A 50:50 blend of the oily nut from the jatropha tree and Jet A1 fuel will power the two-hour exercise that will be monitored by representatives from Boeing, Rolls-Royce and biofuel specialist Honeywe

**UC Davis studying jatropha as potential Southern California oil crop**

The University of California, Davis is conducting research on the oil plant jatropha to determine if the plant can be grown successfully and profitably in Southern California to produce biodiesel.

**Viridas Enterprises Brazil, INEOS Enterprises sign 10-Yr Jatropha Oil Supply Agreement**

Viridas Plc (VIRL.L) announced the signing of a Ten Year Jatropha Oil Supply & Development Agreement with INEOS Enterprises. The agreement between Viridas Enterprises Brazil Ltd., a wholly owned s

**Air New Zealand's Jatropha Test Flight to take place 30 December**

Air New Zealand has confirmed that its test flight powered by a sustainable second-generation biofuel will now take place on 30 December 2008. The flight had originally been planned for 3 December 20