

Agni Net Bio Fuels

Posted on December 1, 2005 by kavitha in [Jatropha/Biodiesel](#)

Pondichery-based firm helps entrepreneurs set up jatropha plantations.

Agni Net Bio Fuels (P) Ltd. (ANBFPL) is involved in both export and cultivation of jatropha in the states of Tamilnadu and Pondicherry. The company also helps entrepreneurs and farmers in setting up jatropha cultivation ventures. ANBFPL provides jatropha seeds for germination, develops high grade nurseries, distributes seedlings and organic manures, gives technological and agricultural informative inputs, buys the seeds for crushing to be done by the valid SHGs and present available oil expellers in rural sectors as per international standards and specifications to fulfill the export parameters.



“The company’s immediate target is 8000 MT of crude oil export before the end of 2005 and bringing an area of 1 lakh acres in the first year under cultivation,” avers S.K.Vinayagem, executive director. The company also provides intercropping techniques and buys back all farm produce of bee hiving, sericulture, edible crops and tree plantations.

Associates of ANBFPL

ANBFPL is an associate of M/s. D1 Oils Ltd, UK. “D1 Oils Ltd. is an international bio diesel supplier which has a massive strength to lift millions of tones of jatropha crude oil. We have signed an agreement with them as an associate to supply 80000 MT of crude oil over the next ten years. The agreement is firm and extendible after 10 years,” avers Mr. Vinayagem.

The company is empanelled as an energy sourcing consultancy organization (ESCO) under United Nations Development Program (UNDP)/ Global Energy Facility (GEF), project steel, ministry of steel, government of India to carry out projects using jatropha oil and oil cake as an alternative fuel in plakhe of furnace oil, coal/coke in steel industries. Jatropha crude oil can be used in plakhe of furnace oil in the industries for thermal application as well as for running F.O. based engines for electric power generation.

“This is the most prestigious and valuable recognition that has been bestowed upon our organization in consideration of our contribution to development and application of alternative and renewable sources of energy and effluent treatment by rapid evaporation technology which in fact is the brain child of our executive director,” says Mr. Vinayagem.

Further talking about the UNDP/ GEF projects Mr. Vinayagem says, “These projects are time bound and turn key based. The alternative and renewable source of fuel such as jatropha oil cake that is required for the above projects is in lakhs of tones which could be met only in part by the domestic availability.” He adds, “We are involved in all stages of production right from seedlings to finished products with presence in both domestic and export market. We are also turnkey consultants for various non-conventional energy projects on EPC basis.

“The company has a tie-up arrangement with M/s Hyquip Projects Pvt Ltd., Hyderabad, for the logistics of the entire end product and process material for export and domestic sector. The company is also in process of tying-up with M/s. Indo Farm Tractors & Motors for sale of farm equipments and tractors directly to end users. Mr. Vinayagem further says, “Our projects are environment oriented. They are eco-friendly. The effluent treatment by rapid evaporation technology ensures 0% discharge and saves water to the extent of 90-95% of the total required quantity of water by any process industry,” says

Infrastructure

The team of ANBFPL comprise 3 directors, 9, managerial staff, 4 technical expertise, 3 project co-ordinators and 24 facilitators. The company has cultivators spread over 14 districts of Tamil Nadu. The asset value of the promoters is around Rs. 600 lakhs. The company has established 15 nursery centres, each spanning over an area of 6 acres with a raising capacity of 10000 plants per day. It also has 3 crushing units, which are in the installation stage at three centers. “Further crushing units are to be established wherever 1000 and more acres of cultivation are concentrated,” informs S.K.Vinayagem. “We are also considering undertaking sick units already existing in such centers. SHGs shall be involved for the extraction of oil,” he adds.

Setting up Jatropha Venture

Since jatropha is a wild crop, it needs technological care when it is cultivated on a large scale. So the success of the contract farming of jatropha depends greatly on the technology backup of the implementing agency. This is highly essential for the bank involved in the contract farming to be free from any risk. Mr. Vinayagem informs, "An investment of Rs.1240 crores on jatropha plantations to an extent of 4 lakh hectares generates a return of Rs.1940 crores creating a profit of Rs. 700 crores in the sixth year and attracting a subsidy of Rs.414 crores."

The company is open to participation in setting up jatropha ventures through contract farming of jatropha. Mr. Vinayagem claims that there are several benefits in extending association with ANBFPL because as associates of D1 Oils Ltd., London and ESCO under UNDP/GEF projects, the company is assured of export business attracting foreign exchange from the second year of the crop.

Moreover the company has a requirement for lakhs of tones of jatropha seeds to meet its export target and domestic demand. "While we have export commitments for the 25-30% of crude oil with M/s. D1 Oils Ltd., we have also a market for 70-75% of oil cake and other value added products of jatropha. It is going to be of a multi crore business with jatropha in our reach," he claims.

Economics of Jatropha Venture

Mr. Vinayagem gives the following economic of setting up a jatropha venture:

Bank Operation : In the jatropha venture the company is prepared to undertake and operate with the banks in the following ways:

c By entering into an MOU for the buy back of the produce.
c Mobilising farmers and land.
c Developing Nurseries for the distribution of seedlings.
c Depositing the produce value in the Bank.

c In all other areas where our involvement is required.

Feasibility, Viability and Marketability of Jatropha

Technical: Jatropha Curcas has been a wild vegetation ever before. Hence it requires no cumbersome plantation technique. This crop has no special requirement for irrigation or fertilization. It can withstand drought and grow in any soil.

Commercial: It has an oil yield of 25-30%. It could be priced much less than the price of its petroleum equivalent, diesel. The present rate of jatropha seed is around Rs.5 per kg. All bio residues of this crop has commercial Value.

Demand: Jatropha fuel products would enjoy a huge market as it is a better substitute to petroleum products the price of which is always on the increase. It is a matter of demand chasing supply of jatropha oil and cake. Jatropha oil and other fuel products will always enjoy an unsaturated market unlike other conventional cash crops whose prices will always vary due to demand and supply.

Marketing: The Jatropha Fuel products could sell almost with nil efforts. In fact we, as the Associates of D1 Oils Ltd UK and as an ESCO for UNDP/GEF projects, already have a requirement of lakhs of tonnes of Jatropha Oil and Oil Cake to meet our present Commitments. Hence marketing of the products is at seller's command.

Carbon Credit

Though carbon credit is available for the plantation coverage of every year only the accumulated coverage of the sixth year is taken for calculation. Accordingly the carbon credit in the sixth year is 23.3 million USD for the plantation coverage of 11.2 lakh acres. The above estimates are indication of only 1% of the dry and waste land available in Tamil Nadu.

Contract Farming Arrangement

The company wishes to join hands with banks in implementing the cultivation of jatropha through their farmers under contract farming. The farmers may be financed as per the bank's regular norms of lending or as per NABARD terms of farm credit. On ANBFPL's part it would be supplying all farm inputs and providing the farmers with farm and plantation related services. On buying back the farm produce of jatropha seeds from the farmers the company shall deposit the pre-determined produce value in the bank facilitating the recovery of the loan given for the plantation.

"In this connection we wish to state that the price of jatropha seed is always going to be on the increase in line with the petroleum prices. As such the interest of the bank will always be protected," says Mr. Vinayagem, adding, "At this juncture we shall assure that out of the lands that we have so far mobilized we shall be glad to bring all the lands under your banks, which may have jurisdiction over them."

A Self Assessment

Mr. Vinayagem further does a self assessment of the company to justify implementation of contract farming of jatropha. He says the following:

1. It is a non-conventional energy consultancy organisation with all necessary infrastructure and media requirements with more than 30 years of proven expertise and feel of the area.
2. It is an associate of M/s. D1 Oils Ltd., UK for the production and export of 80000 MT of jatropha crude oil by an agreement making it possible for huge earnings of foreign exchange.
3. It is one of the few approved ESCOs for UNDP/GEF projects under the ministry of steel, government of India for the implementation of renewable and alternative energy in industries.
4. It is in the consultative committee along with Mr. OLAV LUNDSTOL., portfolio manager, climate change, UNDP - GEF regional co-

ordination unit, Asia and the Pacific, for the development and introduction of renewable and alternative energies like jatropha crude oil and the oil cake in steel industries, a recent meeting of which was held at trichengode on 01.04.05.

5. It has sources for 100% utilization of every bit of the jatropha produce as well as bio residue. Bio diesel is only 30 to 40% of fuel energy from this magic plant. But there is 60-70% of fuel energy from the oil cake and the biomass of jatropha plant the requirement of which for their UNDP/GEF projects is in millions of tonnes.

6. It is also considering a huge export possibility of biomass gasifiers and other non conventional energy systems to West Africa.

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7. It has entered into a tie-up with Indo farm Tractors & Motors for supply of farm equipments to our farmers in an economical way. The plantation coverage of 9.2 lakh acres in the first 5 years will yield a continuous agricultural income of Rs.1840 crores (36.8 lakh ton seed @ Rs.50 crore per lakh ton) from the IX year as the plants will be in full yield. The net volume of business generation will be as below: w Jatropha business would redefine bank business. In the VI year the jatropha produce of 18.8 lakh MT of seed yielding 5.64 lakh M.T of crude oil would generate 169.2 million USD.

w In the IX year 44.8 lakh M.T of seed yielding 13.44 lakh M.T of oil generates 403.2 million USD. The price of jatropha crude oil will have a continuous increase depending on OPEC price and US index.

Technological Services Offered by ANBFPL to Farmers

It is very important to note that every aspect, from the selection of seeds for germination and development of nursery to crushing of seeds and value addition of byproducts, counts.

The company offers a blanket care technological service as follows:

- s Selection of quality seeds for germination.
- s Techniques for land preparation.

- s Plantation Techniques from the day of transplantation
- s Plant Care Techniques
- s Irrigation Techniques for rain water harvesting.
- s Intercropping Techniques
- s Methods of seed collection

- s Oil Extraction Techniques
- s Collection of Bio-residues for Biomass gasification
- s Sericulture Development
- s Bee hiving techniques
- s Briquetting of oil cake for value addition

- s Logistics
- s Energy conversion, etc.
- s Providing farm equipments in an economical way very particularly for this project (well within NOVOD norms)

With regard to farm equipments the company has considered various manufacturers and finalized with M/s Indo Farm Tractors & Motors of Himachal Pradesh under institutional supply for the states of Tamil Nadu and Karnataka. This company is approved by NABARD and government of India test centre. It is an Indo-Poland (M/s.Ursus Diesel Company Ltd) joint venture company.

Export Market

Advance BG and revolving letter of credit from our buyers 180 to 270 days before the company actually makes the supply.

Domestic Market

Advance payment before 90 to 120 days of the supply to be made by the company. BG for the supply to be made by the company before 180 to 270 days. The above amount will be 30% more than the value of our procurement cost of seeds. These concerns are suitably addressed and safeguarded in the company.

ANBFPL Service and Responsibility on Entering a MOU with Bank

ANBFPL provides all essential services and inputs that are required by the farmers. It enters into an agreement with the farmers for the buying of the jatropha seeds @ Rs.5000/- per MT (minimum). The price of seed will be fixed depending upon the OPEC price index. It undertakes to deposit the value of the seeds procured from the farmers directly to the bank.

The company has all necessary infrastructure for facilitating the cultivation, procurement of the seeds, logistics of pooling of seeds and delivery of crude oil at the Port of Chennai/domestic market. "We have all necessary manpower, media facilities and organizational requirements. The basic Indian industry being agriculture we are sure of a bright future through the revolutionary petro crop of jatropha which is possible only with a joint venture of the banks, the farmers and ourselves," maintains Mr. Vinayagam.

Economics

Jatropha being a petrocrop, yielding products which are renewable in nature and cost effective alternatives to petro diesel, has all welcome features for large scale cultivation covering lakhs of acres which in view of a bank has great potential for credit marketing.

ANBFPL Business Strategy

"ANBFPL has taken every effort to ensure 30% yield of oil by selecting quality seeds for germination. We have a unique technology to convert the oil cake into value added fuel products for which ANBFPL has created a huge demand in the cluster development programs which we have undertaken in steel re-rolling mills as an ESCO under UNDP/GEF projects," claims Mr. Vinayagem.

Jatropha being a carbon sink crop there is a great possibility for carbon credit. Jatropha, which would last for more than 30 years, can accommodate various intercrops suited to the environment. This unique speciality of the company's exercise is forming part of our work, which presently could not be provided by other agencies or companies in India.

With ANBFPL the jatropha project is bound to be successful even if there is less oil yield. In our technology a mixture of biomass and jatropha oil cake in the ratio of 3:1 or various briquetted form will yield better calorific performance in plakhe of coal and coke, apart from being more economical and eco-friendly. "As we have more than 3 decades of proven technological experience in non-conventional energy projecting, energy conversion of Jatropha oil cake to replakhe coal and coke in steel and other process industries, towards energy conservation is very much within our capability," adds Mr. Vinayagem.

"Further more since we have made an in-depth study and as we have 16 years of practical experience very particularly in Tree Borne oil seeds and Non-Conventional energy projects for more than 2 decades we will be a better positive player in this venture. The flow chart enclosed herewith will be giving you the highlight about the economic zone adopted by us for the end product (which is a unique technology of ours). We are sure on perusing the same, you will be convinced about the positive nature of our technology and Company."

"Because of our sure move we once again assure that the price of seed that (min of Rs.5000/MT) turns out of our seedlings will always protect the interest of Bank, Farmers and ourselves." The company also assures that it will be coordinating with the regional offices and bank branches with regard to financing farmers who are already augmented by the company within a week from the date of approval.

Further mobilization of farmers and their lands, block wise as well as branch wise will be continued as per the directions by the client. "We shall co-operate with the bank in all areas of the project operation of the contract farming since we know that the involvement of bank in this venture is very important," avers Mr. Vinayagem. The company would be opening satellite offices wherever the plantations are concentrated and has also planned to have branch offices in all district headquarters where its bank co-ordinators will be plaked.

The unique features of the company

Listing the unique features of the company, Mr. Vinayagem says, "The BG, LC or advance payment that we will receive 90 to 270 days in advance as we elaborated earlier will be endorsed to your bank. Hence the payment of the seeds which is made after the harvest is well protected." He adds, "As we have sound technology along with sure and committed exports and domestic market the cost of seeds will be promptly paid at the time of procurement without any delay which in turn would help us to keep the market supply chain always intact among other agencies."

The farm implements and the process machineries are most modern and cost saving. The farmers and the company as well stand to benefit at every stage of operation through out the year which in turn would protect the interest of the Bank. The company also says they are well equipped to take care of the farming activities from seedling to seed collection and then from oil extraction to value addition of the by products. "We are proud to claim that ours company provides clear vision of the project as an ESCO under UNDP/GEF projects, well equipped in the carbon trading system, with combined intercropping techniques and farm machineries run with our own fuel," concludes Mr. Vinayagem.

Volume of Business for the Bank LOAN VS INCOME generated by farmers in Tamil Nadu alone – a projection

Years Area in acre Volume Total in Income
of Credit Crore Every Generated

In Crore Year by farmers

in Crores

1st Year A 1,20,000 120 120 -

2nd Year B 2,00,000 +A 200 + 36 236 30

3rd Year C 2,00,000 + A+B 200+24+60 284 110

4th Year D 2,00,000 + B+C 200+40+60 300 270

5th Year E 2,00,000 + C+D 200+40+60 300 590

6th Year F 9,20,000 ___ ___ 990

Total 1240 1990

Benefits in Cultivating Jatropha

Mr. Vinayagem further talks about the advantages of cultivating jatropha as follows:

? Continuous foreign exchange business available to the tune of 403.2 million USD

? National interest protected to the extent of 828.8 million USD every year.

? Present procurement rate of jatropha seed is Rs 5000 per MT for seeds with 25-30% of oil content. Seeds with less or more oil content would fetch the prices on prorata basis.

? The oil cake would attract a rate of Rs 4000 per MT which in turn would avoid import of coal in great extent.
? The price of seed will be fixed depending upon the OPEC price index.

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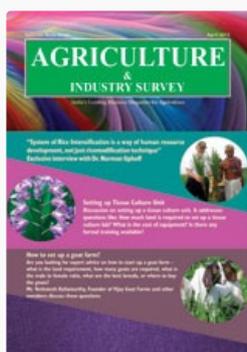
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