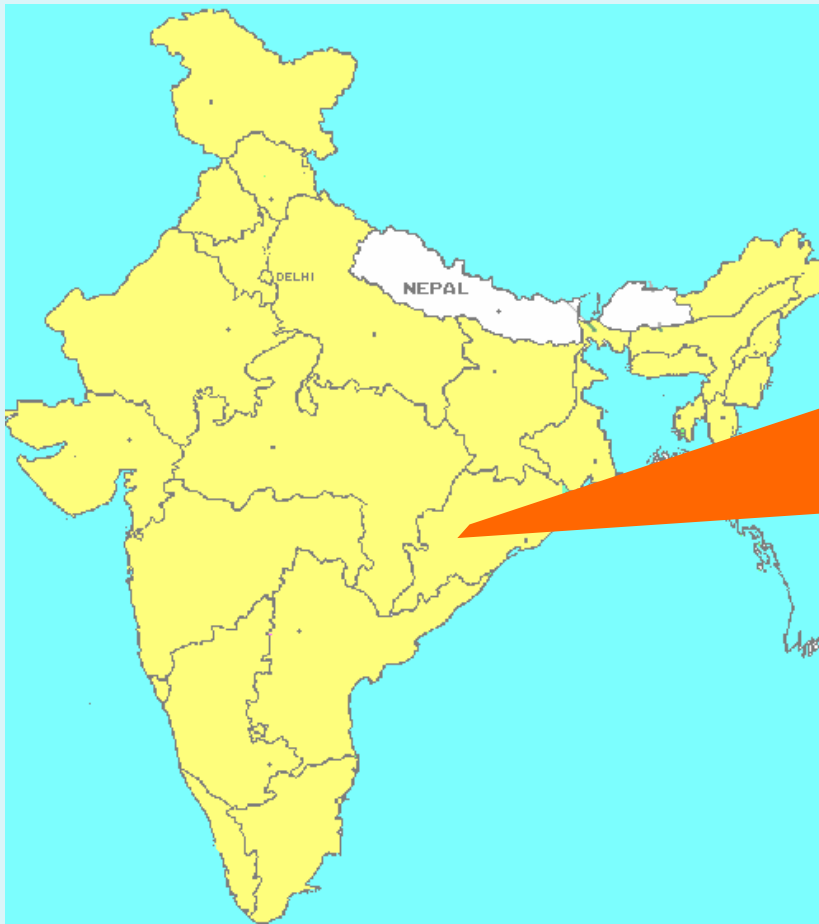




Bio-fuel Initiatives in Orissa

**by
Rebecca Nayar, IFS
Director Biotechnology
&
Addl.secy S&T Deptt
Government of Orissa**

India-Orissa



Potential of Bio-diesel Production

- **The current bio-diesel production potential of the State has been estimated at approximately 1000 Kilo Litres (KL) per annum. With further utilization of about 30% wasteland of the State the production is likely to increase up to 14000 KL per annum.**

contd...

Policy guidelines for Raising of Energy Plantations and bio-diesel production

- **Orissa is home to a number of oil seed bearing tree species (Pongamia, Callophyllum, Terminalia, Madhuca, Neem, Simarauba, Jatropha spp, etc) which have tremendous potential for bio-diesel production**
- **The Planning Commission has identified five districts (Bolangir, Kalahandi, Koraput, Nawarangpur and Nuapara) in the KBK Districts of Orissa for Jatropha cultivation**
- **Waste lands and forest lands are available for taking up large scale plantations of oil seed bearing trees**

Contd...

Quantification of Benefits of Bio-diesel production:

- **Total expected production: 14000 KL per annum**
- **Utilization of wasteland: 0.6 Million Hectares**
- **Employment generation: 100 million man days**
- **Additional organic manure: 42,000 tonnes**

contd

Objectives and strategies

- **To put barren, uncultivated and fallow land of the State into effective use through raising of energy plantations;**
- **To enable the poor and disadvantaged people of the society to take up cultivation of oil seed bearing trees;**
- **To enable interested and eligible entrepreneurs to set up bio-diesel production plants;**
- **To provide suitable market linkage to bio-diesel producers to sell their product and endeavour for a minimum support price.**
- **To set up quality control facilities to guide entrepreneurs to produce bio-diesel conforming to the standards set by Bureau of Indian Standards.**

Supply of seedlings

- **Government and private nurseries shall be encouraged to raise seedlings of Bio-diesel tree species and supply the same to interested farmers, co-operatives, Self Help Groups (SHG) etc. at moderate prices.**
- **Financial incentives shall be provided to women self help groups, grass root level. Non Government organizations/Community Based Organizations (CBOs) and individuals in tribal sub-plan areas for raising nurseries so as to build up a strong and continuous seedling supply chain.**

Availability of land for raising energy plantations

- **About 2 million hectares of land is available under the categories of barren and uncultivated land and fallow lands. A major portion of this land can be utilized for cultivation of oil seed bearing trees. Besides, huge areas of degraded forests are also available in the State where such cultivation can be taken up. Cultivation of oil seed bearing trees can also be taken up in JFM mode on field boundaries, tank bunds, fences etc.**

Incentives for raising commercial plantations

For raising bio diesel plantations different categories of beneficiaries shall be entitled to subsidies under existing provisions as given below:

- a) Van Sanrakshan Samittees , Pani Panchayats,
Co-operatives, Self Help Groups,
Tree Growers' Societies etc. : 50%**
- b) Individual Farmers above poverty line : 33%**
- c) Individual farmers as groups : 50%**

Establishment of Seed collection centres and buy- back arrangements

- **Seed collection centres with adequate infrastructural facilities shall be promoted in private sector at well connected locations for collection and storage of seeds. Such collection centres shall have facility to determine the oil content of seeds, grade and certify the seeds on the basis of their oil content and quality.**

Establishment of Bio-diesel production centres

- **The Biodiesel production units shall be eligible for the incentives provided under PMRY, IPR and under the Biodiesel Policy.**
- **Eligible entrepreneurs shall be entitled to subsidy as per the special package offered under Self Employment Programme implemented by the Industries Department. Such special package allows 15% capital subsidy and 3% interest subsidy.**
- **Small bio-diesel production centres will be encouraged in rural areas for different local applications like water pumping, village electrification etc.**

Selection of Entrepreneur

- **Entrepreneurs for setting up bio-diesel plants shall be promoted by OREDA/OFDC to be selected as per selection procedure in vogue of the District Industries Centres (DIC) so that subsidies are made available under PMRY and other self employment programmes.**

Establishment of Quality Control centres

- **Quality Control and monitoring Facilities shall be created under the State Nodal Department / Agency.**

Information, Education and Communication Activities

- **Training & Extension programmes to be taken up by OREDA, OFDC, OUAT**
- **Propagation of Bio-diesel plantations shall be taken up as a livelihood improvement activity as well as an entry point activity in different rural development programmes.**

Role of Other Agencies

- **Organisations like WORLP, OTELP, Water shed Mission, DRDAs, ITDAs etc. shall also give priority to various promotional activities under these policy guidelines under their existing provisions.**
- **IOCL to establish Bio-Diesel collection centres in Orissa**

Monitoring Committee

- **A State level monitoring committee under the Chairmanship of Chief Secretary comprising of the following members shall monitor various activities under these policy guidelines on a quarterly basis and submit reports to Government in Planning and Co-ordination Department with pertinent suggestions.**

Allocation of land to Oilseed growers:

- **Land as identified above can be given on long term lease basis with proper checks and balances to BPL farmers, SHGs, VSSs for growing oilseed plantations on first come –first serve basis on the advice of the District Advisory Committee on Renewable Energy. If a particular beneficiary cannot raise plantation on the allocated land within a period of 2 years from the date of allocation the allocation will be liable to be rejected and given to the next applicant in queue.**

Allocation of land to Oilseed growers (Contd)

- **Such land may be allotted to landless persons belonging to BPL category as per the OLR /OPLE/OGLS Acts of Revenue Department as poverty alleviation measures.**
- **Plantations may also be raised in Forest land /degraded forests by the Van Suraksha Samities**

Enabling the farmers

- **Training and Extension**
- **Supply of seedlings**
- **Financial Incentives for raising Plantations (Loan, subsidy)**
- **Back ended subsidy of NOVOD Board (The pattern of assistance shall be 30% subsidy, 50% bank loan and 20% beneficiary share. The subsidy shall be restricted to 30% of project cost)**

Setting up Seed Collection Centres

- **Seed Collection Centres with adequate infrastructural facilities shall be established by the designated nodal department/agency of Government at well connected locations for collection and preservation of seeds. Such collection centres shall have facility to measure the oil content of seeds, grade and certify the seeds on the basis of their oil content. Such centres shall purchase the seeds from farmers at support prices determined by Government.**

Setting up of Bio-diesel production units

- **Bio-diesel production can be low tech, and is not capital intensive. Bio-diesel production does not require economy of scale. There is no minimum size for a bio-diesel facility and small decentralized bio-diesel facilities do not require dedicated technical staff support; they can be operated by locally trained non-technical staff.**

Selection of Entrepreneur

- **Entrepreneurs for setting up bio-diesel plants shall be selected as per selection procedure in vogue of the District Industries Centres (DIC).**

Setting up Quality Control Facilities

- **Bureau of Indian Standards (BIS) has specified standards for quality of Bio-diesel for blending with petro-diesel in India. Indian Oil Corporation has also set up certain quality standards and norms for procurement of Bio-diesel by them.**
- **The entrepreneurs in order to sell their bio-diesel must adhere to the above standards and norms and such adherence should be monitored by suitable Quality Control Facilities created under the State Nodal Department / Agency.**

Establishment of Linkages

- **To facilitate and expedite Bio-diesel production in the State, the State Nodal Department / Agency shall establish forward and backward linkages between all stakeholders and continuously monitor and strengthen such linkages.**

Programme for Financial Year – 2006-07

- **Enumeration of Tree borne oilseeds**
- **Training and awareness generation**
- **Identification of Land**
- **Nursery raising**
- **Plantation**
- **Establishment of seed collection centres**
- **Establishment of Bio-diesel production units**
- **Establishment of quality control facilities**

Programme Implementation

- **Chief Executive OREDA will be the State Level Nodal Officer and will be assisted by the Project Division of OREDA at the State level.**
- **The DREC will also function as the District Level Monitoring Unit for Bio-diesel Programme**

Functions of DREC

- **Training and awareness generation.**
- **Receive applications from eligible beneficiaries for plantation of *Jatropha curcas*, process and submit the same to the Project Director, DRDA for recommending the same to appropriate authority for allotment of land.**
- **Prepare DPRs for raising Oilseed Plantation for the land allottees and recommend the same to banks through Project Director, DRDA for sanction of loans.**
- **Co-ordinate with the designated nurseries for supply of seedlings to farmers whose loans have been sanctioned.**
- **Monitor and supervise the progress of plantation work.**
- **Monitor and supervise all activities relating to nursery raising and seedling preparation.**
- **Set up seed collection centres at appropriate locations and manage all its day today affairs including procurement of seeds from all categories of plantation owners at support prices fixed by Government from time to time.**

Functions of DREC (contd)

- **Select entrepreneurs for establishing Bio-diesel production units as per selection procedure of District Industries Centres.**
- **Prepare DPRs for selected entrepreneurs for establishment of bio-diesel production units and recommend the same to banks for sanction of loans through the Project Director, DRDA.**
- **Monitor and supervise establishment of production units.**
- **Ensure regular and timely supply of seeds to the bio-diesel production units by the seed collection centres.**
- **Monitor and supervise the bio-diesel production of the production unit.**
- **Set up quality control units with mobile lab facility and look after their day today affairs.**
- **Checks the quality of bio-diesel produced by the units as per BIS specification and certify the produce accordingly.**
- **Arrange for sale of bio-diesel to previously contracted buyers at predetermined prices.**
- **Submit Monthly Progress Reports on all above activities to the concerned division of OREDA for necessary compilation and submission to KBK Administrator by Chief Executive , OREDA.**

Other activities in Bio-Fuels

- **Dangabhuin a village in Ghumsur North Forest Division & Jagrisoru, a tribal village in Kandhamal District, electrified through use of Pongamia oil**
- **75 litre batch bio-diesel plant at OREDA**
- **Some NGOs have also installed small capacity bio-diesel plants in the State**
- **Collaborative experiment being carried out by IIT – Delhi, OUAT and OFDC Ltd for use of other TBOs**



Thank You