

**POLICY GUIDELINES FOR RAISING OF
ENERGY PLANTATIONS
AND BIO-DIESEL PRODUCTION**

GOVERNMENT OF ORISSA
Science & Technology Department



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POLICY GUIDELINES FOR RAISING OF ENERGY PLANTATIONS AND BIO-DIESEL PRODUCTION

**GOVERNMENT OF ORISSA
Science & Technology Department**

No. 5345/Bhubaneswar

Date.: 23.08.2007

RESOLUTION

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

The question of framing up of Policy Guidelines on matter relating to 'Raising Energy Plantation and Bio-diesel Production' was under active consideration of Government.

After careful consideration and in superssion of Resolution No. 4813/ST dated 23.07.2007 of Government of Orissa in Science & Technology Department, Government have been pleased to formulate Policy Guidelines for raising Energy Plantations and Bio-diesel Production, 2007 as follows:-

Bio-diesel produced from vegetable sources is fast emerging as a viable alternative to fossil fuels, particularly in the face of diminishing supply and the concomitant steep increase in price of fossil fuels.

Production of Bio-diesel also supplements the general economic growth by way of waste land utilization, employment generation, entrepreneurship development, augmentation of additional source of power, increasing share of organic manure in agriculture etc.

1.0 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.

2.0 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

With the above consideration in view, Government has been pleased to decide the following guidelines for implementation and promotion of Bio-diesel in the State.

3.0 Objectives and strategies:

The main objective of the policy is to enhance economic growth through maximisation of production of bio-diesel in the state. Other objectives are:

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

4.0 Operative period:

The promotional and fiscal incentives for raising of energy plantations and establishment of bio-diesel production units will come into operation with immediate effect and will remain in force for a period of TEN years.

5.0 Raising of Energy Plantations:

5.1 Propagation

Although several oil bearing trees like Karanja, Mahua, Polanga, Kusum, Neem, Simaruba, Sal, Linseed, Castor, Jatropha etc. are native to Orissa, systematic propagation and processing of these seeds is very important in view of large scale commercial production of bio-diesel. However, the proposed magnitude of the campaign calls for well laid out actions and well defined roles and responsibilities of different stakeholders.

5.2 Selection of Trees:

Except Polanga, which grows well in regions closer to the sea coast all other species can be grown all over the State even on marginal and degraded lands.

Oil seed bearing trees can be chosen depending upon the local agro-climatic conditions and commercial viability for large scale bio-diesel production. *Pongamia piñata* and *Jatropha curcas*, however, are generally accepted biodiesel species.

5.3 Supply of seedlings:

Government and private nurseries shall be encouraged to prepare 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.

5.4 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.

5.5 Distribution of land:

5.5.1 Identification of land:

While farmers have to be encouraged to raise energy plantations along the fence and bunds of cultivated lands, the very success of the programme depends on raising such plantations on marginal and degraded lands. Such areas coming under common land, wasteland, canal and tank bunds, degraded forests, along the railway tracks, highways have to be identified by designated Government Departments/Agencies/Panchayati Raj Institutions/Urban Local Bodies and given on long term lease to interested Van Sanrakshan Samittees , Pani Panchayats, co-operatives, Self Help Groups, Tree Growers' Societies etc. for plantation purpose.

5.5.2 Eligibility

Under these policy guidelines all families are eligible for admissible government incentives under different programmes for raising energy plantations.

Self Help Groups, other farmers groups, associations, consortia etc. will be preferred. Groups and families belonging to BPL category would get SGSY subsidy as admissible.

5.5.3 Allocation of land:

Allocation of land may be made as per prevailing Acts of the Revenue Department under Orissa Land Reforms/Orissa Prevention of Land Encroachment Act/Orissa Government Land Settlement Act to self-help groups and others as mentioned in para 5.5.1.

Van Suraksha Samittees may also raise energy plantations in forest and degraded forest land as per their approved JFM plans. In such cases the quantity of land and subsidy to be allocated per VSS may be decided as per the existing norms of Forest Department. Besides, Panchyats can avail use of revenue land under the Sabujima scheme for raising energy plantations.

The above arrangement, however, does not prevent others to grow plantation on their own lands or to take up contract farming as per the existing laws until a state waste land policy is drafted and accepted prescribing models for various types of plantations.

5.6 Incentives for raising commercial plantations:

For raising commercial plantations different categories of cultivators can avail financial assistance under back-ended credit linked subsidy programme of National Oilseed and Vegetable Development (NOVOD) Board under the Ministry of Agriculture, Government of India. Full advantage should be taken up of their back-ended subsidy. The pattern of financial assistance under NOVOD is appended to this policy guidelines as **Annexure - A**. NABARD also supports development of wastelands through energy plantations, bio-diesel crop as one of its thrust areas. It extends 100 per cent refinance to banks at concessional rates of interest. The model unit cost and quantum of refinance circulated by NABARD is enclosed at **Annexure - B**.

5.6.1 For raising energy plantations at present subsidy @ 30% subject to the benchmark cost of Rs 30,000/- per hectare is available under the NOVOD guidelines. The pattern of assistance is 30% subsidy, 50%

bank loan and 20% beneficiary share.

For all group activities 50% subsidy could be available to the group and in case of loan no collateral security would be needed. OREDA/ OFDC would operate with a revolving fund to start with and claim reimbursement of admissible subsidy from NOVOD Board on a group basis in due course.

In any central, state or centrally sponsored scheme provided for taking up land development and plantation in eligible private lands full advantage would be taken up by the administrative department.

5.6.2 Subsidies:

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% |

Subsidies and investments on infrastructure allowed under SGSY, RLTA, NREGA, ITDA, Compensatory afforestation, BRGF, WODC, NRHM, OTELP, WORLP etc. would be admissible as per existing norms and special provision in these programmes. Funds received from Government of India would be routed through OREDA and OFDC for Jatropha and Karanj Plntation respectively.

6.0 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.

7.0 Establishment of Bio-diesel production centres

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 nontechnical staff.

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.

Indian Oil Corporation has agreed to buy entire bio-diesel produced in the State, subject to quality and regulation of supply.

7.1 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.

8.0 Preparation of Detailed Project Reports (DPR):

Standard priced DPRs for different capacities of Bio-diesel Plants shall be made available by OREDA, who would work in close coordination with IIT, Delhi.

9.0 Establishment of Quality Control centres:

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 shall be monitored by suitable Quality Control Facilities created under the State Nodal Department / Agency.

Such facilities shall also duly certify the Bio-diesel following which sale to indenting buyers or consumption for one self can be effected by the respective Bio-diesel unit.

10.0 Information, Education and Communication Activities:

As of now, there is very little mass awareness about organized plantations of oil seed bearing trees in the State. The opportunities and potential to various beneficiaries like farmers, traders, industry and consumers have to be properly articulated. Booklets, brochures, manuals, etc have to be prepared in Oriya detailing the package of practices in plantation of bio-fuel trees, collection and preservation of seeds, buy back arrangements, economics, financial incentives, loans etc. and widely circulated among farmers. Government Departments like Agriculture, Forest, Orissa University of Agriculture and Technology, Krishi Vigyan Kendras , Panchayati Raj Institutions, Non Government Organisations and other grass root level extension functionaries , electronic media, etc. should be adequately geared up to take up the task of awareness and education.

Suitable budgetary provisions shall be made by the State Government for such extensive awareness and education campaigns, to be given as grants in aid to OREDA/OFDC.

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.

11.0 Role of Different Government Agencies :

11.1 Role of OREDA

Orissa Renewable Energy Development Agency, in short OREDA, will act as the Nodal Agency for bio-diesel development in the State and function as the single window for promotion and facilitation of all projects prepared under these guidelines. It shall also act as the nodal agency for propagation of non-forest oil seed bearing tree species like *Jatropha curcas*.

11.2 Role of Orissa Forest Development Corporation (OFDC) LTD

OFDC Ltd shall act as the State Nodal Agency for intensive cultivation of forest Bio-diesel species like Karanja, Mahua, Polanga etc. on degraded forest land.

11.3 Role of Orissa University of Agriculture and Technology (OUAT) and Biju Patnaik University of Technology (BPUT)

OUAT and BPUT shall act as support agencies for technological and scientific inputs and mass awareness generation at grass root level. They may be suitably assisted for R&D Projects.

11.4 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.

12.0 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.

List of members:

- i) Chief Administrator, KBK
- ii) Development Commissioner
- iii) Agriculture Production Commissioner

- iv) Secretary to Government, Finance Department
- v) Secretary to Government, Science and Technology Department
- vi) Secretary to Government, Panchayati Raj Department
- vii) Secretary to Government, Industries Department
- viii) Secretary to Government, Agriculture Department
- ix) Secretary to Government, Forest and Environment Department
- x) Secretary to Government, Revenue Department
- xi) Special Secretary / Additional Secretary Planning and Coordination Department.
- xii) Vice Chancellors of OUAT/ BPUT
- xiii) Two Representatives of Industry
- xiv) Representative of Indian Oil Corporation
- xv) Representative of IIT, New Delhi
- xvi) Chief Executive, OREDA, Member Convener

Besides, the subject of bio-diesel production shall be regularly discussed in important forums like State Level Bankers' Committee (SLBC), District Level Coordination Committee (DLCC), Block Level Coordination Committee (BLCC), Panchayat Samittees.

13.0 District level Task Force:

A district level task force shall be constituted involving representatives of OREDA, OFDC, DRDAs, ITDAs, NGOs, local engineering colleges and other academic institutes to regularly monitor and follow up various activities concerning energy plantation and bio diesel production at the district level.

Order: Ordered that this Resolution be published in the extra ordinary issue of Orissa gazettee.

By the order of the Governor

N. C. VASUDEVAN
Principal Secretary to government
Science & Technology Department

SCOPE, ACTIVITIES & GUIDELINES
NATIONAL OILSEEDS & VEGETABLE OILS DEVELOPMENT BOARD
Ministry of Agriculture, Govt. of India
Plot No. - 86, Sector - 18, Institutional Area
Gurgaon - 122015
(July, 2004)

NATIONAL OILSEEDS AND VEGETABLE OILS DEVELOPMENT BOARD

SCOPE, ACTIVITIES AND GUIDELINES

1. THE BOARD

National Oilseeds and Vegetable Oils Development (NOVOD) Board was created under NOVOD Board Act, 1983 (No.29 of 1983) and came into being on 8th March, 1984. The Act provides for integrated development of oilseeds and vegetable oils industry under the control of the Union Government. The Board has comprehensive functions as per the provisions under the Act and covers all aspects of development of oilseeds and vegetable oils industry including production, processing, marketing, trade, storage, research & development and financing. It has an advisory role in the formulation of integrated policy and programmes of development of oilseeds and vegetable oils.

2. COMPOSITION OF THE BOARD

The Board has 36 members including the Chairman. Union Minister of Agriculture is the Chairman of the Board and Secretary (A&C), Deptt. of Agriculture & Cooperation, Govt. of India is its Vice-Chairman. The Board consists of representatives of the Central Government (10), Central Autonomous organisations (5), State Governments (11), Members of Parliament (3), Representative of oilseeds growers (3), Representative of Trade & Industry (2) and other interests (2).

The NOVOD Board Act also provides for a Managing Committee of the Board which is headed by the Secretary (A&C), Govt. of India, to look after its day-to-day affairs. The Committee has been delegated appropriate powers to carry out its function.

3. OBJECTIVES

The Board has been entrusted with the nodal responsibility for integrated development of tree borne oilseeds with focus on generation of rural employment through exploitation of existing potential and augmenting the future potential. The brief objectives of the scheme for the implementation during 10th plan are given below :-

- Improve the quality of seeds of TBO collected by unemployed women and tribal by augmenting handling through creation of appropriate infrastructure.
- Promote the plantation of potential TBOs in wasteland through augmentation of superior planting material, production technologies and handling system.
- Develop and refine the technologies for improved productivity, quality, value addition etc by assisting capable institutions to take such programmes.
- Create awareness through training, seminar, workshop, publication & publicity etc. among farmers and primary processing industries for improved agronomic practices and new technologies.
- Generate income and employment opportunities for small and marginal farmers and other weaker sections of society, particularly those living below poverty line and women folk etc.

4. PROGRAMMES:

A. Back-ended credit linked subsidy programme:

- Establishment of seed procurement centres;
- Installation of multi-purpose pre-processing and processing facility;

- Installation of oil expeller;
- Nursery raising.
- Commercial plantation & maintenance.

B. Promotional Programmes

- Technology development & refinement;
- Development of elite planting material;
- Model plantation & maintenance;
- Establishment of TBOs garden;
- Feasibility studies for various components;

C. Transfer of Technology

- Farmers training;
- Trainers training;
- Publicity and publicity material;
- Observation-cum-study tour;
- Seminar/Workshop/Exhibition.

5. IMPLEMENTING AGENCIES:

A. Back-ended credit linked subsidy programme:

- Government/Semi-Govt. Organizations, Co-operative Institutions, Federations, Corporations, NGOs/VOs/ Individual etc.

B. Promotional programmes

- Central and State Government organizations, Autonomous bodies like Institutes of ICAR, ICFRE and CSIR; Central/State/Deemed Universities, etc.

C. Transfer of Technology

- Central and State/Semi-Government organizations, Central & State Research Institution, Corporations, Federations, Co-operative Institutions, NGOs/VOs etc.

6. GUIDELINES FOR SUBMISSION OF PROPOSALS FOR “IN PRINCIPLE APPROVAL (IPA)” AND RELEASE OF SUBSIDY

A. Back-ended credit linked subsidy programmes:-

- (i) 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 and the ceiling of amount shall be as indicated in paragraph 8 below.

PROCEDURE FOR IPA

- (ii) The beneficiaries will submit the Project Proposal for “In Principle Approval (IPA)” for back-ended credit linked subsidy programme to the Executive Director, NOVOD Board, Gurgaon in prescribed format (Annexure-I).
- (iii) After scrutiny the NOVOD Board shall place, all such proposals before the MC for “In Principle Approval” of the subsidy component and the same shall intimated to the beneficiary.
- (iv) The IPA will be valid for one year from the date of issue. The beneficiary will accordingly approach Bank/Financial Institution of his choice immediately after obtaining the IPA from NOVOD Board and get his/her term loan sanctioned by Bank/FI within a period of one year.
- (v) Mere issuance of the IPA would not guarantee the grant of subsidy to the beneficiary unless the proposal is implemented in accordance with the overall guidelines of the scheme.
- (vi) NOVOD Board will not entertain any cost escalation over and above the expenditure shown in the IPA.
- (vii) Additional cost, if any will have to be borne by the beneficiary.

- (viii) While deciding the subsidy the Board will restrict the expenditure on any component as per the ceiling fixed by it.
- (ix) The project will not be eligible to receive subsidy under NOVOD Board programme in case benefit of subsidy for the same from another agency of the Central/State Govt. has been availed.

PROCEDURE FOR RELEASE OF SUBSIDY

- (x) The project would be completed within a period of 2 years from the date of the sanctioned of loan. The payment of back-ended subsidy will be made after project has been successfully completed, according to the terms & conditions of the loan. Thereafter, the Executive Director, NOVOD Board could sanction the release of subsidy of the Bank/Financial Institution on their request in prescribed format (Annexure-II).
- (xi) Bank will submit to NOVOD Board the progress of investment subsidy achievement in the format (Annexure-III).
- (xii) On completion of the project, the concerned bank would inform the NOVOD Board, that the project has been completed, and also furnish a Utilization Certificate (Annexure-IV) of the subsidy released by the NOVOD Board.
- (xiii) Any dispute arising out of the above shall be subject to the jurisdiction of Gurgaon Court.

B. Promotional and transfer of technology programme

- (i) The pattern of assistance shall be as per scales/ceiling indicated in paragraph 8 below.
- (ii) Proposals for financial assistance under the promotional and technology transfer programmes shall be submitted

by the following implementing agencies to the Executive Director, NOVOD latest by 31st January of every year for financial support into the following year, in the application form (Annexure-V) for promotional programme, Annexure-VI for Technology Refinement and Annexure-VII for Transfer of Technology Programme).

- i. State Governments i.e. Deptts. of Agriculture, Horticulture, Soil Conservation, Forest.
- ii. Semi-Govt. organizations, Research Institutes, SAUs, Oil Federations, Co-operatives, PSUs and other Semi Government Organization. The Semi-Government Organization may submit their project proposals through State Department of Agriculture in respect of production programmes and through the concerned department of the State Govt. for other programmes and the research institutions through their apex bodies like ICAR and CSIR as the case may be to avoid duplicacy. Semi-Govt. organizations have also to sign a MOU for long term R&D projects, before release of funds to them (Annexure-VIII).
- iii. Non-Govt. Organizations (NGOs)/Voluntary Organization (VOs). NGOs/Vos, have to furnish the following supporting documents alongwith their proposals:-
 - Valid registration certificate, audited accounts and annual reports of the previous three years,
 - Recommendation from the Distt. Authorities like District Collector or District Agriculture/Horticulture Officer of the concerned Districts.
 - The views/comments of State Deptt. of Agriculture in case the proposal contains the production programmes for any cultivated oilseed crop.
 - All NGOs/VOs are required to sign a bond on non-judicial stamp paper (ten rupees only) in the District Court,

Gurgaon, as per Annexure-IX. However, in exceptional cases, the E.D. may consider grant of exemption from this requirement.

- In case NGO/VO is associated in long term R&D projects, it has to sign MOU also before release of funds to them (Annexure-VIII).
 - The necessary travelling expenses by ordinary bus or IInd class train fare will be borne by the Board for the authorized signatory of the NGO alongwith his two sureties for signing the Bond in case of NGOs/Vos.
 - Board shall also undertake physical verification of infrastructure of NGO's/VO's who have prima/facie furnished satisfactory information. Such verification by the Board would be aimed to satisfy credentials, ability and potential of such organization for the purpose of particular schemes of the Board to be implemented by them.
 - Utilization Certificate in respect of funds released by the Board, in format GFR 19-A (Annexure-XI).
- (iv). Viability of the Project Proposals received under the promotional programme will be examined by the Board and placed before the Project Appraisal Committee (PAC) constituted for the purpose. The Board can also refer the Project Proposals to State Governments/Experts for their opinion.
 - (v). Projects found viable will be placed before the Managing Committee(M.C.) and or the Board, depending on the quantum of assistance for approval. The quantum of assistance to be extended to the project will be decided by the M.C./Board subject to monitory limits prescribed hereunder at Sr.No.8, i.e. Pattern of Financial Assistance.

7. MONITORING OF THE PROJECT

Except for the back-ended credit linked subsidy schemes, each beneficiary will submit a progress report to the Board on a quarterly basis. The progress report will indicate the status of implementation of the project, activities undertaken during the quarter, physical progress, utilization of funds, bottlenecks, if any. Projects will be visited by the Board's Officers individually or with a team of experts at least once during the season/course of implementation. However, research projects are to be reviewed by a team of experts on annual basis.

8. PATTERN OF FINANCIAL ASSISTANCE:

The scheme-wise pattern of funding for various components under the back-ended credit linked subsidy programme, as well as promotional programmes shall be as under:-

1. Back-ended credit linked subsidy programme (30% subsidy, 50% bank loan, 20% beneficiary share)

Implementing agencies -

Government/Semi Govt. Organizations, Co-operative Institutions, Federations, Corporations, NGOs/VOs/Individual etc.

Under this scheme, following two separate projects will be considered:-

Project -1: Establishment of model seed procurement centre & Installation of pre-processing and processing equipments

Quantum of assistance - Subsidy restricted to 30% of project cost with the ceiling as under:-

- i) Government/Semi Govt Organizations, Co-operative institutions, Federations, Corporations etc. : 4 projects with a ceiling of Rs.25.00 lakhs
- ii) NGOs/VOs/Individual - One project with a ceiling of Rs. 6.50 lakhs

1.1. Establishment of model seed procurement centre : One

Sr. No.	Component	Tentative cost (Rs.)	Back-ended credit linked subsidy restricted to 30% of project cost with ceiling of Rs.
I.	Cost of building (PCC floor with asbestos roof)Processing shed+godown for keeping raw material and storage for oil and cake 50x40 sq.ft.@ Rs. 200 per square (2000 sq.ft.)	4,00,000	1,20,000
II.	Cleaner and grader	25,000	8,000
III.	Decorticator/dehuller	25,000	8,000
IV.	Drier	25,000	8,000
V.	Depulper	25,000	8,000
VI.	a. Oil expeller (5 MT per day capacity) b. 40 HP motor c. Starter/main switch d. Installation e. Conveyor/Elevator f. Electric line from main feeder upto centre	5,00,000 40,000 3,000 10,000 25,000 10,000	1,50,000 12,000 1,000 3,000 8,000 3,000
VII.	Security deposits for electric connection 3 phase, water connection etc.	38,000	11,600
VIII.	Stitching machine	6,000	2,000
IX.	2 storage tank for oil - 1 MT each @ Rs. 5000/-MT	10,000	3,000

X.	Filter press	25,000	8,000
XI.	Weighing machine	25,000	8,000
XII.	Moisture meter (1)	10,000	3,000
XIII.	Gunny bags for oil cake etc.	20,000	6,000
XIV.	Drying floor - 2000 sq.ft. (40 ft.x50 ft.) PCC @ Rs. 100/-sft.	2,00,000	60,000
XV.	DG set - 1 (10 KVA)	2,00,000	60,000
XVI.	Furniture & stationary	65,000	20,000
	Total	16,87,000	5,10,000

Sub centre - One

i.	Weighing machine @ Rs. 0.10 lakh	10,000	4,000
ii	Office & store @ Rs. 1.00 lakh	1,00,000	30,000
iii	Miscellaneous such as furnit- ure, stationery etc	20,000	6,000
	Total	1,35,000	40,000

1.2. Installation of multi-purpose pre-processing and processing equipments

Sr. No.	Component	Unit cost (Rs.)	Back-ended credit linked subsidy restricted to 30% of project cost with ceiling of Rs.
i.	1. Depulper	25,000	8,000
	2. Drier	25,000	8,000
	3. Decorticator/ dehuller	25,000	8,000
	4. Cleaner&Grader/ any other equipment	25,000	8,000
	Total	1,00,000	32,000

1.3 Installation of oil expeller

Sr.No.	Component	Unit cost (Rs.)	Back-ended credit linked subsidy restricted to 30% of project cost with ceiling of Rs.
i.	Oil expeller for TBO's	1,50,000	45,000/-

Project-2: Nursery raising, commercial plantation & maintenance

Quantum of assistance - Subsidy restricted to 30% of project cost with the ceiling as under:-

- i) Government/Semi Govt Organizations, Co-operative institutions, Federations, Corporations etc. : One project with ceiling of Rs. 25.00 lakh.
- ii) NGOs/VOs/Individual - One project with ceiling of Rs. 6.5 lakh

1.4. Nursery raising & commercial plantation

Sr. No.	Name of TBO	No. of Plants per ha.	Cost of cultivation (Rs./ha.)	Back-ended credit linked subsidy restricted to 30% of project cost with ceiling of Rs.
1.	Simarouba	500	16,000	4,800
2.	Neem	400	11,000	3,300
3.	Jojoba	2500	80,000	24,000
4.	Karanja	500	13,000	3,900
5.	Mahua	200	9000	2,700
6.	Wild apricot	400	10,000	3,000
7.	Jatropha	2500	25,000	7,500
8.	Cheura	250	9,000	2,400
9.	Kokum	250	10,000	3,000
10.	Tung	500	14,000	4,200

1.5 Maintenance (From 2nd year onwards of plantation during gestation period)

Sr. No.	Name of TBO's	Gestation period (year)	Cost of maintenance per ha. upto gestation period	Back-ended credit linked subsidy restricted to 30% of project cost with ceiling of Rs.
	Simarouba	5	14,500	4,400
	Neem	5	12,000	3,600
	Jojoba	4	15,000	4,600
	Karanja	4	11,000	3,100
	Mahua	8	23,500	7,100
	Wild pricot	4	10,500	3,200
	Jatropha	2	5,000	1,500
	Cheura	4	9,000	2,800
	Kokum	6	13,000	3,900
	Tung	4	12,000	3,700

2. Promotional programmes:

Implementing agency - Central and State Government organizations, Autonomous bodies like Institutes of ICAR, ICFRE and CSIR; Central/State/Deemed Universities., etc.

Quantum of assistance - Following financial assistance will be provided

Central and State Government organization, Autonomous bodies like ICAR, ICFRE and CSIR; Central/State/Deemed Universities.etc. - Rs. 75.00 lakhs (Maximum)

2.1 Technology development & refinement

100% assistance towards cost of need based project staff purely on contract basis, equipments, chemical / consumables / agricultural input, POL and institutional charges @ 10% of the project cost.

2.2. Development of elite planting material & model plantation

Sr. No.	Name of TBOs	No. of plants Per ha.	X Plan (actual expenditure subject to ceiling of Rs./ha.)
1.	Simarouba	500	16,000
2.	Neem	400	11,000
3.	Jojoba	2500	30,000
4.	Karanja	500	13,000
5.	Mahua	200	9,000
6.	Wild apricot	400	10,000
7.	Jatropha	2500	25,000
8.	Cheura	250	9,000
9.	Kokum	250	10,000
10.	Tung	500	14,000

2.3 Maintenance (for 2 years after plantation)

Sr. No.	Name of TBOs	Year of maintenance	X Plan (actual expenditure subject to ceiling of Rs. per year)
1.	Simarouba	2	1,500
2.	Neem	2	1,500
3.	Jojoba	2	2,500
4.	Karanja	2	1,500
5.	Mahua	2	1,500
6.	Wild apricot	2	1,500
7.	Jatropha	1	2,500
8.	Cheura	2	1,500
9.	Kokum	2	1,500
10.	Tung	2	1,500

2.4 Establishment of TBO garden/park

80% of the actual expenditure subject to ceiling of Rs. 0.40 lakh/ha garden area towards cost of nursery raising, plantation, maintenance, fencing, irrigation facilities etc.

2.5 Feasibility studies for various components

Actual expenditure towards survey, project staff, survey equipments, contingency or any other expenditure.

3 Transfer of technology

Implementing agency - Central and State Government Organizations, Semi Govt. Organizations, Autonomous bodies like Institutes of ICAR, CSIR, ICFRE, Central/State/Deemed Universities., Co-operative Institutions, Federations, Corporations, NGOs/VOs etc.

Quantum of assistance - Following financial assistance will be provided

- i) Central and State Government Organizations, Semi Govt. Organizations, Autonomous bodies like Central/State/Deemed Universities., Institute of ICAR, CSIR, ICFRE etc, Co-operative Institutions, Federations, Corporations etc. - Rs. 2.00 lakh/year
- ii) NGOs/VOs - Rs.1.00 lakh/year

3.1 Farmers training & trainers training (2 days for 50 participants)

Sr. No.	Component	Trainers training (Actual expenditure subject to the ceiling)	Farmers Training (Actual expenditure subject to the ceiling)
i.	Boarding & lodging	15000.00+	7000.00*
ii.	Literature	12500.00++	5000.00**
iii.	Honorarium & incentive to staff @ Rs.4000/- per training	5000.00	4000.00
iv.	POL, stationery, field visit & misc.	6000.00	3500.00

v.	Audio-video aids @ Rs.500/training	2000.00	500.00
	Total	40500.00	20000.00

+Rs. 150/participant/day

++Rs.250/participant/trg.

*Rs. 70/participant/day

**Rs.100/participant/trg.

3.2 Publication & publicity material

100% assistance for publication and publicity material in regional languages on different TBOs.

3.3 Observation-cum-study tour

Rs.31,500/- plus actual bus fare/Second Class Train Fare for 50 farmers/seed collectors for visit to potential areas/institutions.

3.4 Seminar/workshop/exhibition

Assistance as per norms of Govt. of India and availability of funds.

4. Monitoring, evaluation & technical support

Actual expenditure

ANNEXURE-1

Application for In Principle Approval (IPA) under the scheme “Back-ended Credit Linked subsidy programme on Tree Borne Oilseeds”.

- i) Date of application.....
- ii) File No.

To
 The Executive Director
 National Oilseeds & Vegetable Oils
 Development Board
 Plot No.86, Sector 18, Institutional Area
 Gurgaon-122015 (Haryana)

(Application In Principle Approval (IPA) under the scheme “Back-ended Credit Linked subsidy programme on Tree Borne Oilseeds” of National Oilseeds & Vegetable Oils Development Board)

A. PROMOTERS PROFILE

1. Name and address of the beneficiary/organization:
2. Status whether Govt/Co-operative/NGO/Private:
3. Registration No..... Date of Registration.....
4. Area of operation : Name of district/tehsil/taluka
5. Name and address of the Nationalized Bank from which term loan is proposed to be availed.
6. Details of financial assistance availed by the applicant in the past for the similar activity at the same piece of land, if any

Name of Programme/Project	Funding agency	Duration	Amount (Rs. lakhs)

7. Details of financial assistance, if availed for any other project:
8. Whether any scheme with NOVOD Board assistance implemented: (If yes, please write name of scheme and year of implementation):

B. PROPOSED PROJECT

1. Name of the project:
2. Objective of the project:
 - i) Use of wasteland/degraded problematic (acidic/alkaline) etc.
 - ii) Compact area plantation
 - iii) Name of the plant/trees proposed
3. Location
4. Nature/main activity proposed under the project
 - i) Availability of land (in ha.) for nursery and plantation
 - ii) Capacity in MT in case of primary processing unit/procurement centre/sub-centre:
 - iii) Technology tie-up, if any

C. PROJECT COST (COMPONENTWISE)

1. Raising of nursery and commercial plantation:
2. Maintenance of plantation:
3. Establishment of model seed procurement centre:
4. Installation of multi-purpose pre-processing and processing equipments
5. Installation of oil expeller

D. PROPOSED MEANS OF FINANCE

1. Promoter’s share
2. Term loan from Banks (address of the Bank branch)

3. NOVOD subsidy
4. Other sources viz. Assistance from State Govt/
5. Govt. of India Agencies, if any.

E. DETAILS OF LAND

1. In case of own land, copy of latest title/papers be enclosed
2. In case of lease/contract/tenancy, a copy of the registered agreement be enclosed.

F. DETAILS OF SEED COLLECTION/MARKETING

1. Name of the TBOs
2. Expected collection in qutls.(for each TBO)
3. Cost of collection per qutl. (for each TBO)
4. Name of the agency with which marketing tie-up exists(Backward/forward linkages)

G. IMPLEMENTATION SCHEDULE

1. Proposed month for undertaking the project + land development
2. Proposed month for nursery raising
3. Expected month of commercial plantation
4. Duration of completion of civil works for establishing model seed procurement centre/installation of multi-purpose pre-processing and processing equipments.
5. Proposed date for start of the unit in case of processing units

(Authorized signatory)

Name & Address

Format for claiming Final Installment of Subsidy under the scheme “Integrated Development of Tree Borne Oilseeds”

(To be submitted by Bank in triplicate to NOVOD Board)

Investment Subsidy Scheme for Cultivation / Processing of TBOs

Part-I

For use by Bank

1.	Name & Address/Location of Project	
2.	Name & Address of beneficiary	
3.	Name & Address of Financing Bank	
4.	Date of Sanction of Term Loan by Bank	
5.	Date of Sanction of Refinance by NABARD, if applicable	
6.	Date & Amount of Refinance released by NABARD	
7.	Item wise Financial Projection	
8.	i. Total Cost of Project ii. Beneficiary Contribution iii. Bank Loan	Rs. Rs. Rs.
9.	Additional Capacity to be created :	

(a) Establishment of model new procurement centre and installation of pre-processing and processing equipments

Components	No. of unit	Capacity in MTs
i. Existing Unit		
ii. Expansion/New		
iii. Renovation/Upgradation		

Or

(b) Nursery raising, plantation and maintenance (ha.)

Components	Species/ plants	Area (ha.)	No. of plants	Unit Cost/ ha
i. Existing				
ii. Expansion/ new				
iii. Maintenance				

10. Advance Subsidy:	
i. Date of Receipt	
ii. Amount	Rs.
11. Rate of Interest being Charged by Financing Bank	% p.a.
a. In the case of CBs PLR	% p.a.
b. In the case of others PLR	% p.a.

12. Whether construction/expansion/renovation has been carried out as per the technical parameters envisaged under the project. Yes/No.
13. Since the above project is complete as per terms and conditions stipulated under the scheme, final inspection of the processing unit / plantation has been arranged and an amount of Rs. _____ (Rupees _____) being the final installment of subsidy may please be released for crediting to the Subsidy Reserve Fund Account Borrower wise. Copy of the inspection report of inspection committee is enclosed.
14. It is certified that the observation made by the Inspection Committee have been complied with. A copy of the Inspection Report of Inspection Committee is enclosed.

Seal and signature of the
Branch Manager (Bank)

Place : _____

Date : _____

Encl: As above.

PART-II

B. For use by NOVOD Board

Name of Scheme:	Name of Project:
State:	Bank:
District	1. Total cost of project 2. Total amount of eligible subsidy 3. 50% of advance amount of eligible subsidy

An amount of Rs. _____ is released as final installment of subsidy to _____ (Name of the Bank) vide subsidy disbursement advice No. _____ (Copy enclosed) against the project proposal submitted by _____ party.

(_____)

Authorised Signatory, NOVOD Board

(Name & designation)

Date _____

ANNEXURE-III

**Progress of Investment Subsidy Scheme for Processing of TBOs
(ABSTRACT) under Integrated Development of Tree Borne
Oilseeds**

(To be filled by Bank)

STATUS AS ON _____

A. Financial Progress

S. No.	State	Name of the Party	Location	Capacity Tonne/ acreage	Total Financial Outlay	Bank Loan	Beneficiary	Total Eligible Subsidy	Subsidy released to beneficiary

B. Physical progress/Achievement

Sr. No.	Component	Physical Progress		Expenditure		Remarks
		Target	Achievement	Target	Achievement	
1.	Establishment of model seed procurement centre					
2.	Nursery raising					
3.	Commercial plantation					
4.	Maintenance of plantation					

* The above information break up be furnished in the same format for schemes sanctioned in NE States, Hilly Areas i.e. location above 1000 meters mean sea level, SC and STs separately.

ANNEXURE-IV

(For the use of Financing Bank to be submitted by
(Bank in triplicate to the NOVOD Board))

Investment Subsidy Scheme for Cultivation / Processing of TBOs

Utilisation Certificate

1.	Name & Address and Location of Beneficiary and Project	
2.	Name of the Financing Bank	
3.	Name & Address of Financing Branch	
4.	Date of Sanction of Loan by Bank	
5.	Date of Inspection by Inspection Committee	
6.	Date of Commission of the Unit	
7.	i. Total Financial Outlay	Rs.
	ii. Margin Money	Rs.
	iii. Bank Loan	Rs.
	iv. Subsidy Received	

Subsidy Received	Letter No. & Date of Receipt from NOVOD Board	Amount (Rs.)	Date of Credit to the Subsidy Reserve Fund A/c of the Borrowers
50% Advance Subsidy			
Final Installment of Subsidy			
Total			

8. Capacity Created:

		No. of unit	Capacity in MTs
i	Existing Unit		
ii.	Expansion/New		
iii.	Renovation/Upgradation		
9.	Rates of Interest charged by Financing Bank	% p.a.	
	a. N the case of CBs	PLR - % p.a.	
	b. In the case of others - PLR of Convenor Bank of SLBC		

This is to certify that amount of Rs. _____ received as subsidy from NOVOD Board in respect of the above project has been fully utilised for the purpose for which it was sanctioned (by way of crediting to the “Subsidy Reserve Fund Account - Borrower wise”) and adjusted in the books of account under the sanctioned terms and conditions of the project within the overall guidelines of the scheme. Remaining un-utilized balance subsidy of Rs. _____ (if any) on completion of the project or non-implementation of the project has been surrendered to the Board

**Seal and signature of
the Branch Manager (Financing Bank)**

Place _____

Date _____

**PROFORMA FOR PREPARATION OF PROJECT
PROPOSAL FOR INTEGRATED DEVELOPMENT OF
TREE-BORNE OILSEEDS (TBOs)**

1. Name of Organisation :
2. Status : Whether Govt./ Cooperative/ NGO/ Private.
3. Area of Operation : Name of distts :
Inside/outside of the forest compact area/farm/bunds/canal side, road side, railway track.
4. Objectives i) Use of waste land-degraded problematic (acidic/alkalines) etc.
ii) Compact area plantation with viable combinations (early/late bearing or intercropping of crops with perennial trees for example retanjyot and simarouba with neem or pulse crops with perennial oil bearing trees.
iii) Name of the plants/trees proposed
5. Present status under proposed plants in the proposed Districts/ areas

Name of the tree	Distt.	Soil type	Area occupied (ha)	Approx. No. of trees	Present use collection (qtls.)
------------------	--------	-----------	--------------------	----------------------	--------------------------------

6. Future Prospects

Name of the tree	Distt.	Land availability Area Type (ha)	Ownership Govt./Coop. NGO/Pvt.	No. of seedlings required
------------------	--------	--	--------------------------------------	------------------------------

7. Nursery

7.1 Method of raising seedlings

- a) By seed
- b) By vegetative propagation i.e cutting, layering etc.

7.2 Cost of inputs/seedlings (Input means seed, fertilizer, Poly-bags etc.).

7.3 Action plan of raising seedling.

Tree	Distt.	Availability of the parent material	Year	No. of seedlings/ samplings to be raised
------	--------	-------------------------------------	------	--

8. Plantation programmes

Name of the tree	Year	Time of plantation	Area to be covered Area No of plants	Cost per plant (Digging, fert, irrigation etc.)	Gestation Period
------------------	------	--------------------	---	--	------------------

9. Cost of maintenance and watch & ward for proposed area:

To be borne by the programme implementing agency. Source to meet the cost.

10. Seed Collection/Marketing

Tree	Year	Expected collection (Qtls.)	Cost of collection per (Qtls.)	Agency
------	------	--------------------------------	-----------------------------------	--------

11. Post Harvest Technology Programmes (PHT)

Components	Present Status Future Plan (with details)
i) Drying facility	
ii) Transport	
iii) Storage without use of pesticide	
iv) Extraction of oil	
v) Value addition for export / modification of fats.	

12. Financial Requirments (Rs. in lakh)

Tree	Year	Nursery	Plant-ation	Collection PHT	Tra-ining	Total
------	------	---------	-------------	----------------	-----------	-------

13. Technology Upgradation : (For Example requirement/ actions for genetic improvements, quality standardisation, addition of national / inter-national know-how.

14. Recommendations.

ANNEXURE-VI

PROFORMA OF APPLICATION FOR GRANT-IN-AID FOR RESEARCH AND DEVELOPMENT PROGRAMMES FROM NATIONAL OILSEEDS & VEGETABLE OILS DEVELOPMENT BOARD

Title of Scheme

1. Name & address of the : _____
Organisation with phone, _____
Telex, Fax No. _____
2. Status (Govt./Semi-Govt./NGO)
3. Facility to be provided by the Centre for the proposed project :
“ Staff :
“ Equipments/Apparatus :
“ Laboratory :
“ Transport :
“ Area of land for experimentation :
“ Other facilities :
4. Name of the Scientists/Deptts. of each Centre(s) to be associated in the project: _____
5. Name & Address of Principal Investigator : _____
and Co-Principal Investigator (Phone, Telex _____
Fax No.) with details expertise/experience,
schemes handled, publications etc.
6. A) Research work conducted on the subject by the Institute :
i) at its centre : _____
ii) in India : _____
iii) abroad : _____

B) Programme activity :

7. Title of the scheme/project : _____
8. Duration of the project : _____
9. Specific Objectives : _____

10. Area of Operation: - Institutional research farms
- Community land
- Forest area
- Waste land etc.
11. Type/Qt./No. of equipments / : _____
apparatus required.
12. Action plan and Expected outcome (yearwise)/with practical/
scientific utility

S.No.	Year	Activity	Outcome	Utility
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

12.1 Programme Schedule

13. Main items of observations : _____
: _____
: _____

14. Budget Estimates

(Rs. in lakhs)

S.No.	Component	YEAR			Total
		2004- 2005	2005- 2006	2006- 2007	
1.	Salary *				
2.	Equipments **				
3.	Chemical consumable/ nursery input ***				
4.	POL				
5.	Institutional OR contingency charges @ 10%				
	Total				

* Need based on contractual basis only. Please indicate name / No.of the post with salary per month as per existing norms of the Institute alongwith their prescribed qualifications.

** List of equipments with cost.

*** Detailed list of Chemical/consumable & other inputs with cost estimate.

UNDERTAKING

15. Certified that

- i) The research work proposed in the scheme does not in any way duplicate the research work already done and being carried out elsewhere on the subject.
- ii) The present scheme will not be combined with any scheme financed by the Central and State Governments, Universities or Private Institutions etc.

iii) We undertake to abide by the guidelines provided by the Board for the implementation of the Project.

Place : Signature : _____

Date : Name : _____

Designation of the Principal Investigator

16. Remarks/recommendations from the Head of the Instt./Centre

17. Recommendations: (From the apex bodies of the Institute i.e. ICAR, CSIR, ICFRE as the case may be)

Signature : _____

Name : _____

Head of the Organisation/Institute

ANNEXURE-VII

PROFORMA FOR PREPARATION OF PROJECT PROPOSAL ON TRAINING FOR INTEGRATED DEVELOPMENT OF TREE-BORNE OILSEEDS (tbos)

1. Name of Organisation : _____
2. Status : Whether Govt., Semi Govt. i.e.Cooperative Or Federation, NGO/Private. If NGO, Please indicate -:
Registration No _____ and
Date of Registration _____
3. Area of Operation :
 - a) Name of distts :
 - b) Name of Block :

4. Current area of activities :

<u>Activities in Hand</u>	<u>Amount</u>	<u>Duration</u>	<u>Funding Agency</u>
---------------------------	---------------	-----------------	-----------------------

5. Details of available infrastructure :

- a) Office - whether Rented/Own
- b) No. of staff with their qualification and area of specialisation
- c) Transport facility
- d) Source of funding

6. Status of Tree-Borne Oilseeds in your Districts/Areas :

District	Name of Tree	Approximate number of Trees	Approximate potential (Qtls.)	Quantity (Rs./Kg)	Collection	
					Price	Name of buyer

7. Title of the project : Trainers’ training/ Farmer’s training programme for quality collection of Tree Borne Oilseeds(TBOs) like neem seed, mango kernel etc.

8. Training & publicity :

- a) Availability of resource personnel alongwith name and address
- b) Number of beneficiary to be trained
- c) Tentative date and duration of Training
- d) Componentwise cost proposed :-
 - i) Boarding & lodging
 - ii) Literature
 - iii) Stationery and POL & field visit
 - iv) Honorarium & incentive to staff
 - v) Audio visual aid

Total

MEMORANDUM OF UNDERSTANDING BETWEEN THE NATIONAL OILSEEDS AND VEGETABLE OILS DEVELOPMENT BOARD AND THEIN RESPECT OF RESEARCH & DEVELOPMENT PROJECT ONFOR FINANCE FROM THE GRANT IN AID OF NOVOD BOARD

The National Oilseeds and Vegetable Oils Development (NOVOD) Board and (Implementing agency) agree to co-operate in conducting research and development project entitled “.....” sanctioned by the Board and communicated to the implementing agency vide this Board’s letter No..... dated to be located at Under the supervision and the leadership of Shri/Dr./Prof.....

- I. In order to achieve the objectives set out in the project within the targetted time, the National Oilseeds and Vegetable Oils Development Board agree to provide for the following:-
 - a. Salaries of the project staff to be engaged purely on contract basis for project period as per I.C.A.R. NORMS.
 - b. Travelling allowance as per their Institutional norm.
 - c. Recurring and non-recurring contingencies to the extent provided in the project.
- II. The implementing agency agrees for the following:-
 - a. To start the implementation of the project including the appointment of contractual staff within 2 months from the date of approval of the project by the NOVOD Board.
 - b. To provide their existing equipment and other physical facilities as are required for the project work.
 - c. To arrange land and laboratory facilities required for the project.
 - d. To arrange such skilled and unskilled labour required for the project work.

- e. To provide on their own such ancillary staff as Field/Laboratory Assistants or Attendants, Clerks and Stenographers etc., as are required for the project work.
 - f. To avoid transfer of the scientific staff associate in the project without the concurrence of the Board.
 - g. To allow the project staff to exchange experimental material, literature etc. between the similar Research Centres within the State as well as outside the state.
 - h. To permit the scientific staff to attend the relevant workshop, Seminars, symposia, Conference, Group meetings etc.
 - i. To use the staff exclusively for the project work.
 - j. To use the funds provided under the project exclusively for the project work.
 - k. To render accounts to the Board periodically in time.
 - l. To furnish regularly and on time satisfactory half-yearly and annual reports.
- III. The National Oilseeds and Vegetable Oils Development Board and the implementing agency mutually agree that:-
- a. The project staff provided under the project would be utilized exclusively for the project work.
 - b. Change of Principal investigator/ Leadership is not normally acceptable. However, in exceptional cases, whenever there is sufficient justification, which is acceptable to the Board, such changes may be agreed to but this provision should be used very sparingly.
 - c. Scientific staff would attend the workshop, meetings and present their data for discussion.
 - d. Normally grants are released in two installments in case of Semi. Govt Organization and in three installments in case of NGOs. The first installment would be released immediately after the issue of the final sanction and acceptance of the terms & conditions by the implementing organization. The second and

subsequent installments would depend upon the receipt of the satisfactory progress reports.

- e. The implementing agency would ensure the submission of satisfactory progress of work under the project as per the approved technical programme.
- f. Five copies of final and consolidated report would be submitted to the Board by the Principal Investigator within three months after the closing of the project.
- g. The experimental material built-up under the project/ centre for free supply to the other centres working on similar project in the country. However, the produce in excess of the research requirement may be disposed of by the agency in consultation of NOVOD Board in the manner it deems fit and proceeds may be credited to its accounts under intimation to the NOVOD Board.
- h. The institute is not permitted to seek or utilize funds from any other organization (Government, Semi.Government, Autonomous or private) for the work that is supported under this project/scheme. Any unspent part of the amount sanctioned would be surrendered to NOVOD. Carry forward of funds to the next financial year for utilization under the same project may be considered only with the specific approval of the NOVOD Board.
- i. At the conclusion of the project, the NOVOD will be free to sell or otherwise dispose of assets, which are the property of NOVOD. The institutions shall render to NOVOD necessary facilities for arranging the sale of these assets. The NOVOD has the discretion to gift the assets to the institute, if it considers it appropriate.
- j. NOVOD will be free to get the progress of the project reviewed in detail by a Group of Experts assigned by NOVOD at the end of each year. In addition, Board's Officer may visit the institute

periodically for ascertaining the progress of work and resolving any difficulties that might be encountered in the course of implementation.

- k. The institute will furnish to the NOVOD, Utilization Certificate and an audited statement of accounts pertaining to the grant within six months following the end of each financial year.
- l. The know-how generated from the project would be the property of NOVOD, any receipt by way of Sale proceeds, if any, resulting from the project arising directly from funds granted under the scheme shall be remitted to NOVOD may, at its discretion, allow all or a portion of such a receipts to be retained by the institute.
- m. NOVOD will have the right to call for drawing specification and other details necessary to enable the transfer of know-how to other parties and the institute should supply the needed information at the request of NOVOD.
- n. The institute may not entrust the implementation of the work for which grant is being sanctioned, to another institution and to divert the grant receipts as assistance to other institute. In case, the institute itself is not in a position to execute or complete the project, it may be required to refund forthwith to NOVOD the entire amount of grant-in-aid received by it. In exceptional cases, this condition may be relaxed by NOVOD.
- o. The staff that may be employed for the project by the institution are not to be treated as employees of NOVOD and the employment of such staff at the time of completion or termination of the project will not be the concern/responsibility of NOVOD. They will be subjected to administrative control and service rules as applicable (Leave, T.A.& D.A. etc.) of the institute.
- p. For the expenditure on implementation of the research project, the Investigator Incharge will take the assistance of the

supporting staff of the institute concerned as also in the process of selection and appointment of staff and payment to them.

- q. NOVOD reserves the right to terminate the grant at any stage, if it is convinced that the grant is not being properly utilized or appropriate progress is not being made.
- r. The project will become operative with effect from the date on the grant is received by the institute. The date will be intimated by the institute to the NOVOD.
- s. Fund sanctioned by NOVOD will not be utilized by the institute for foreign travel of any employee.
- t. The seedlings/saplings prepared during the project period would be utilized for plantations in the compact areas by the programme implementing/concerned centre and through the developmental organizations in consultation with NOVOD Board.
- u. In case of any dispute arising between the parties, the dispute shall be referred to the sole arbitrator to be appointed by the NOVOD Board. The decision of the sole arbitrator so appointed shall be final and binding on both the parties.
- v. The R&D know how developed under this project will be patented in the joint name of NOVOD Board and the institute.

This Memorandum of understanding shall become effective from the date of issue of the administrative approval.

Signature
(Executive Authority/ Authorized
Officer)
Implementing agency

Signature
Secretary
National Oilseeds
and Vegetable Oils
Development Board.

ANNEXURE-IX

FORM OF AGREEMENT/BOND TO BE EXECUTED BEFORE RELEASE OF GRANTS-IN-AID TO VOLUNTARY ORGANIZATIONS AND NGOs

AN AGREEMENT made onday of One thousand nine hundred and BETWEEN (hereinafter called the Beneficiary which expression shall include his heirs, administrators, executors and legal representatives) of the one part and the National Oilseeds & Vegetable Oils Development Board (hereinafter called the NOVOD Board, which expression shall include his successors and assignees), of the other part.

Whereas the Beneficiary has applied to the NOVOD Board for a grant-in-aid of Rs.for the purpose of and whereas Board has agreed to grant the Rs. to the Beneficiary on the terms and conditions hereinafter contained.

- a. Before a grant is released, the grantee institution is required to execute a Bond, with two sureties.
- b. It will abide by the terms and conditions of the grant as was annexed with the sanction letter and completion of the progra
- c. mme by the target dates, if any, specified therein,
- d. It will not divert the grants and entrust execution of the scheme of work concerned to any other institution or organisation, and
- e. It shall abide by any other conditions specified in this agreement and in the event of its failing to comply with the conditions or committing breach of the bond, the grantee and the sureties, individually and jointly will be liable to refund the entire amount of the grant with interest thereon or the sum specified under the bond.

NOW IT IS HEREBY AGREED Between the parties hereto that

In consideration of the sum of Rs..... to be paid by the NOVOD Board to the Beneficiary, the Beneficiary hereby agrees with the NOVOD Board that amount released to them will be utilized strictly in accordance with the terms of the sanction, within the prescribed time frame failing which the full amount will be refunded to the NOVOD Board together with interest. The decision of the NOVOD Board or any of the officer authorized by it for the purpose, regarding non-utilization of the above sum for the said purpose or violation of any of the terms contained in the sanction letter shall be final and binding on the parties.

All the disputes will be subject to the jurisdiction of the District Court, Gurgaon.

IN WITNESS/SURETIES whereof the BENEFCIARY has hereunto set his hand and Shri

in the NOVOD Board

for and on behalf of the NOVOD Board has hereunto set his hand.

* Signed by the said in the presence and with the sureties of

- 1.
- 2.

(Signature of witnesses and sureties)

(Signature and designation of the Beneficiary)

For and on behalf of the NOVOD Board in the presence of

- 1.
- 2.

(Signature of Witnesses) (Signature and designation of the officer)

*Name and designation of the Beneficiary (This is to be signed at Gurgaon)

There are more than 200 names for it all over the world, which indicates its significance to man, and the various possibilities of its use. In India, *Jatropha curcas* is found in almost all the states and is generally grown as a live fence for protection of agricultural fields from damage by livestock as it is not eaten by cattle or goat.

BOTANICAL FEATURES

It is a small tree or shrub with smooth gray bark, which exudes a whitish colored, water, latex when cut. Normally, it grows between three and five meters in height, but can attain a height of up to eight or ten meters under favourable conditions.

Leaves

It has large green to pale-green leaves, alternate to sub-opposite, three-to-five lobed with spiral phyllotaxis.

Flowers

The petiole length ranges between 6-23 mm. The inflorescence is formed in the leaf axil. Flowers are formed terminally, individually, with female flower usually slightly larger and occur in the hot seasons. In conditions where continuous growth occurs, an unbalance of pistillate or staminate flower production results in a higher number of female flowers.

Fruits

Fruits are produced in winter when the shrub is leafless, or it may produce several crops during the year if soil moisture is good and temperatures are sufficiently high. Each **inflorescence** yields a bunch of approximately 10 or more ovoid fruits.

A three, bi-valved cocci is formed after the seeds mature.

Seeds

The seeds become mature when the capsule changes from green to yellow, after two to four months from fertilization. The blackish, thin shelled seeds are oblong and resemble small castor seeds.

Ecological Requirements

Jatropha curcas grows almost anywhere- even on gravelly, sandy and saline soils. It can thrive on the poorest stony soil. It can grow even in the crevices of rocks.

The leaves shed during the winter months form mulch around the base of the plant. The organic matter from shed leaves enhances earthworm activity in the soil around the root-zone of the plants, which improves the fertility of the soil.

Regarding climate, *Jatropha curcas* is found in the tropics and subtropics and likes heat, although it does well even in lower temperatures and can withstand a light frost. Its water requirement is extremely low and it can stand long periods of drought by shedding most of its leaves to reduce transpiration loss. *Jatropha* is also suitable for preventing soil erosion and shifting of sand dunes.

Cultivation practices

It can be easily propagated on massive scale by direct seeding as well as planting stem cuttings. Hot and humid weather is preferred for good germination of seed. Plants bear fruits in the beginning of winter. Approximately 5-6 kgs. of seed is adequate to raise one hectare of plantation. The spacing maintained is about 2m x 2m and for high density planting 2m x 1m distance can be recommended. Seeds or cuttings can be directly planted in the main field. Some times the seedlings are grown in poly bags and then transplanted in the main field. The land should be ploughed once or twice depending upon the nature of soil. In direct planting system the seed/cuttings should be planted in the main field with onset of monsoon at a spacing indicated above. Apart from organic manure, mixtures, fertilizers containing NPK should be applied near the planting hole. To keep the land free from weeds in the initial stage, 3-4 hand weedings are necessary; it does not require supplementary irrigation. However, the approximate yield of 1200 kg seed per hectare may be obtained from irrigated plantations in comparison to 750 kg seed (per hectare) from rainfed

plantations. This is expected from 3rd year onwards. The economic life of the plant is about 35-40 years. Jatropha oil is extracted by hydraulic press method after grinding and steaming of the seed.

Unit cost

The cost of cultivation of Jatropha curcas in one hectare at an espacement of 3m X 2m i.e., 1666 plants per ha has been worked out at Rs.25,826/- per ha. (unirrigated condition). The details of various items of expenditure are viz. land preparation, digging of pits, plant and material, manure and fertilizer, inter culture, watering and plant protection etc. The unit cost break up of Jatropha curcas is as follows:

UNIT COST OF Jatropha curcas CULTIVATION IN ONE HECTARE WASTELAND(seedling)

ESPACEMENT: 3 M x 2 M AVG. WAGE RATE: Rs.50/MD

NO.OF TREES/HA.: 1666 CASUALTY REPLACEMENT:10 %

SURVIVAL/HA.: 1500 Nos.

YIELD AND INCOME PER HECTARE OF JATROPHA CULTIVATION ON WASTELANDS

YEAR	SEED PER TREE(Kg.)	NO.OF TREES	QNTY.OF SEED(KG)	COST PER KG.	TOTAL INCOME (RS)
3	0.50	1500	750	5	3750
4	0.50	1500	750	5	3750
5	1.00	1500	1500	5	7500
6	1.50	1500	2250	5	11250
7	2.00	1500	3000	5	15000
8	2.50	1500	3750	5	18750

Economics of Jatropha cultivation in one Hectare of wasteland

Years	1	2	3	4	5	6	7	8
Cost	16220	5825	3780					
Benefits			3750	3750	7500	11250	15000	18750
Net Benefit	-16220	-5825	-30	3750	7500	11250	15000	18750
PWC @ 15%	20994.30							
PWB @ 15%	24970.74							
BCR	1.19							
IRR	19.41%							

Commercial uses of the Plant

The increasing gap between demand and supply of fuel wood leads to fast depletion of forest cover. There is need to search for alternative source of energy derived from non-wood sources. For this purpose high density plantation of Jatropha, as an energy crop, may provide energy on regular basis annually for a period of 40-45 years without replanting, unlike other fuel wood crops. With suitable technology, jatropha could possibly be used as furnace fuel to facilitate electricity generation in a decentralized manner and at a lower cost as compared to the existing power generation system, which requires massive infrastructure for distribution of power.

Besides the above, the following additional benefits can also be expected:

- Jatropha oil is a potential substitute for diesel providing the country cheap and renewable source of energy for transport & power and can effect sizeable savings on foreign exchange.

- b) Jatropha oil has a very high saponification value and is being extensively used for **soap making, lubricants and candles**. The protein content in Jatropha oil cake may be used as a raw material for **plastic and synthetic fibre**.
- c) Jatropha plant has **high medicinal value**. The latex of Jatropha curcas contains an alkaloid known as **Jatrophine**, which is used in medicines.
- d) Jatropha oil cake is rich in nitrogen, phosphorous and potassium and can be used as **organic manure**.
- e) Revegetation of barren and denuded hills with Jatropha plants combats **environmental pollution**.

Thus, owing to its multiple uses, simple and cost effective technology, with or without irrigation makes it promising and profitable agro forestry crop ensuring optimum utilisation of land and manpower. It is a crop with low capital investment, short gestation period, long productive period and unlimited employment potential in rural areas.

Yield & Economics

The plant starts giving yield from the third year onwards and the benefits increase over the years and stabilizes in the 8th year. In the financial analysis with the above parameters of the investment cost & yields, the BCR & IRR works out to 1.19 & 19.41% respectively.

Repayment of Loan

A moratorium of four years for repayment of principal and two years for payment of interest may be allowed.

Beneficiaries Contribution / Margin Money / Down Payment

The beneficiaries may contribute towards down payment ranging from 5 to 25% depending upon their category, i.e., small and other farmers

in accordance with NABARD's norms. Beneficiary's own labour can also be taken as his contribution towards the margin money requirement.

Quantum of Refinance

The loans extended by the banks to individual farmers and / or groups of individuals such as co-operatives under Wasteland development projects are eligible for refinance from NABARD to the extent of 100% of Bank loan.

Rate of Interest

The rate of interest on refinance from NABARD will be as per the circulars issued by NABARD from time to time. The rate of interest to be charged to the ultimate borrowers would be decided by the financing banks. However for working out the financial viability and bankability of the model project we have assumed the rate of interest as 12%.

Memo No 5346/ST dated the 23.08.2007

Copy forwarded to the Director, Printing & Stationary & Publication, Orissa , Cuttack for Publication in the extra ordinary issue of Orissa Gazettee.

500 copies of the resolution may be supplied to this Department.