



झारखंड के लिए कृषि क्षेत्र निवेश गतिविधियों की इकाई  
लागत 2024-25

**Unit Cost of Farm Sector Investment Activities in  
Jharkhand for 2024-25**

राष्ट्रीय कृषि और ग्रामीण विकास बैंक  
झारखंड क्षेत्रीय कार्यालय, रांची

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for fostering rural prosperity”*

### **Mission**

*“Promote sustainable and equitable agriculture  
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and non-financial interventions, innovations, technology  
and institutional development for securing prosperity”*

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## प्राक्कथन

कृषि के उत्पादन और उत्पादकता को बढ़ाने के लिए पूंजी निर्माण आवश्यक है। कृषि के लिए निवेश ऋण, पूंजी निर्माण में महत्वपूर्ण भूमिका निभाता है। बैंकों को अपना निवेश ऋण बढ़ाने में मदद करने के लिए, नाबार्ड की कृषि और संबद्ध क्षेत्रों में निवेश गतिविधियों के लिए इकाई लागत के निर्धारण में बड़ी भूमिका रही है।



विभिन्न कृषि क्षेत्र निवेश गतिविधियों के लिए इकाई लागत को अंतिम रूप देने की जिम्मेदारी राज्य स्तरीय इकाई लागत समिति (एसएलयूसीसी) की है। नाबार्ड प्रत्येक वर्ष राज्य स्तरीय इकाई लागत समिति (एसएलयूसीसी) की बैठक आयोजित करता है जिसमें सरकारी विभाग, अनुसंधान एजेंसियां/संस्थान और प्रमुख बैंक, सदस्य के रूप में भाग लेते हैं। राज्य स्तरीय इकाई लागत समिति (एसएलयूसीसी) राज्य में मौजूदा परिस्थितियों के आधार पर निवेश गतिविधियों की तकनीकी एवं वित्तीय व्यवहार्यता और बैंक योग्यता को ध्यान में रखते हुए इकाई लागत को अंतिम रूप देता है। इकाई लागत, वित्तपोषण एजेंसियों के लिए एक सांकेतिक बेंचमार्क के रूप में कार्य करती है और पूंजी निर्माण के लिए ऋण के प्रवाह की सुविधा प्रदान करती है। बैंकों को जमीनी स्तर पर शर्तों के आधार पर अनुशंसित इकाई लागत से उचित सीमा तक विचलन करने की स्वतंत्रता है। इकाई लागत का ज्ञान, उधारकर्ताओं को इष्टतम वित्तपोषण प्राप्त करने और बैंकों को अधिक वित्तपोषण से बचने में मदद करता है।

झारखंड राज्य में मत्स्य पालन एक उदीयमान क्षेत्र होने के कारण इस गतिविधि के माध्यम से ग्रामीण झारखंड में समृद्धि आने की उम्मीद है। इसी प्रकार राज्य में वन क्षेत्र की अधिकता तथा जनजातीय बहुल जनसंख्या होने के कारण पशुपालन के क्षेत्र में विशेषकर बकरी-पालन, मुर्गी-पालन, शूकर पालन तथा गव्य विकास की अपार संभावनाएँ हैं। मुर्गी-पालन में उत्पादकता को बढ़ावा देने के लिए कम लागत सोलर-प्रकाश आधारित अवयवों का भी समावेश किया गया है। मौसम में बदलाव को देखते हुए किसानों को कुछ हद तक आय सुरक्षा प्रदान करने के उद्देश्य से चार "समेकित खेती प्रणाली" के मॉडल भी समावेश किए गए हैं।

06 मार्च 2024 को झारखंड क्षेत्रीय कार्यालय में आयोजित बैठक में राज्य स्तरीय इकाई लागत समिति द्वारा अनुमोदित विभिन्न निवेश गतिविधियों की इकाई लागत वाली इस पुस्तिका को प्रस्तुत करते हुए मुझे खुशी हो रही है। मैं समिति के सभी सदस्यों को उनकी सक्रिय भागीदारी और विभिन्न निवेश गतिविधियों के लिए इकाई लागत के निर्धारण में मूल्यवान सुझावों के लिए धन्यवाद देता हूँ, मुझे उम्मीद है कि सभी बैंक और सरकारी लाइन विभाग इसे राज्य में कृषि निवेश ऋण के विकास में तेजी लाने के लिए उपयोगी पाएंगे।

एस के जहागीरदार

(एस के जहागीरदार)

मुख्य महाप्रबंधक







# Minor Irrigation and Micro Irrigation

## A. MINOR IRRIGATION

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (Years)	Gestation Period
1	Dug well (in soft rock formation)	3m dia x 12m depth	138500	11-15	23 months
2	Dug well (in hard rock formation)	3m dia x 12m depth	150750	11-15	23 months
3	Cavity Boring	100 mm dia x 25m depth	25000	11-15	11 months
4	Shallow Tube well	100 mm dia x 30m depth	27500	11-15	11 months
5	Shallow Tube well	100 mm dia x 45m depth	44000	11-15	11 months
6	Low lift Irrigation	10 Acre command area with 500' delivery pipe	121000	9	Nil
7	Tube well in Hard Rock Area -Diesel Pump set	(100 mm dia ; 45m depth) 8 HP	105000	11-15	11 months
8	Pump House	2.5m x 2.5m x 2.1m	27500	9	11 months
9	Delivery Chamber	Lump sum	2750		11 months
10	Diesel Run Pump set	4.5 HP	31500	9	11 months
11	Electric Run Pump set	2 HP	18500	9	11 months
12	Electric Run Pump set	5 HP	42000	9	11 months
13	Solar Run Pump set Subsidy is available @ 110 per wp subject to a max of 2,50,000 per pump set.	0.5 HP to 2 HP	1,90,000 to 2,70,000 (depending on supplier and model)	9	11 months
14	Micro Sprinkler irrigation System	1 ha (Under PMKSY, it will provide subsidy @55% of the indicative unit cost to small and marginal farmers and @45% to other farmer for encouraging them to install Drip and Sprinkler system)	71500 (with 5m*5m Spacing)	5	11 months
			82500 (with 3m*3m spacing)		
15	Treadle Pump set	20 m deep 40 mm dia tube well	10500	7	Nil

### Terms & Conditions:

- Banks should ensure implementation of groundwater development activities only in 'safe' category blocks. In case of activities for ground water extraction in 'semi- critical' and 'critical' blocks, it shall ensure that application is submitted along with a favourable technical feasibility study report issued for same by competent authority of State/District Ground Water Department.
- The following minimum spacing to be observed between wells while implementing the activities,
  - Between two Dug wells with or without pump set: 180 m
  - Between two Bore wells with pump sets: 250 m
  - Between Dug wells & Bore wells: 215 m
- Banks to encourage usage of energy efficient pump sets for such activities. The standard star ratings provided by EESL may be used for this purpose.

## 4. Renovation/ Deepening of Wells

- Only those wells having insufficient water column during summer and need deepening to ensure adequate yield for meeting the water requirement of the crop shall be covered under the programme.
- The spacing norms between wells may be adhered to under Deepening of wells also.

## 5. Power Supply

Before approving loan for electric pump sets, the bank shall satisfy itself that the village is electrified and that timely power supply would be available to the beneficiary for operation of the pump set.

## 6. Minimum Acreage Norms

Structure	Benefiting Area (ha)
Dug well with Pump set	1.0
Bore well with SIP	1.6

- If the beneficiary's own cultivated area is smaller than that which can be irrigated by well/ tube well/ bore well, the bank may advise the beneficiary that he can sell surplus water to other farmer. Income from sale of water, if any, may be reckoned for purpose of reckoning the viability and bankability of investments up to a maximum of 50% of the loan repayment instalment.

**Detailed Cost Breakup:****1. Dug well in hard rock formation (12m depth and 3m dia) – Based on Rate S.O.R. WRD & RDD, Ranchi (JH)**

S. No.	S.O.R. Item No.	Details	Qty	Unit Size	Rate	Amt (₹)
1	WRD 5.1.3.1	Jungle Clearance including weeding out shrubs and small trees up to 150mm dia and their removal as per specification and Direction of E/I.	11.34	Sq. Meter	10	113
2	WRD, 6.1.8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance up to 50m and average lift of 1.5 m including levelling, ramming the foundation trenches removing the roots or shrubs etc., all complete as per specification and direction of E/I	7.2	Cu. Meter	214	1540
3	WRD, 6.1.8+ 6.1.9+ 6.1.18	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item B) and disposal of excavated earth so obtained to a distance up to 50m and average lift of 1.5 m including levelling, ramming the foundation trenches removing the roots or shrubs etc., all complete as per specification and direction of E/I (Soft Soil ) and (Hard Soil)	245	Cu. Meter	220 270	53900 66150
4	WRD 5.2.29	Rubble Masonry Foundation - Providing rough dressed random rubble stone masonry in cement mortal (1:4) in foundation with approved quality of coarse sand of requisite F.M. (2.5 to 3) washed and screened with raking out joints, curing, scaffolding and its removal wherever required including royalty etc. complete job as per specification and direction of E/I.	12.61	Cu. Meter	2500	31525
5	WRD 5.3.6	Copping with (1:2:4)- for Providing and laying PCC or RCC M-150 with normal mix of (1:2:4) in various components of dam foundation with approved quality of 20 mm graded coarse aggregate of required graded as per design and approved quality of sand of requisite FM ( 2.5 to 3 ) washed and screened excluding cost of shuttering or form work as well as reinforcement , its cutting , bending, binding and placing but including necessary tools and plants and vibrating , curing , royalty , all taxes etc.	1.64	Cu. Meter	5400	8856
6	WRD Chp. no. 3, 3.6	Plaster- Providing 25mm thick Cement Plaster (1:4) with approve quality of sand requisite F.M. (2.5 to 3) washed and screened including curing, scaffolding wherever required and its removal royalty etc. complete job as per Specification and direction of E/I.	21.7	Sq. Meter	255	5533
7		Transportation of material. Transportation of Lead 5 km	46.81	Cu. Meter	792	37073
<b>TOTAL – (for soft rock formations)</b>						<b>138540</b>
<b>(for hard rock formations)</b>						<b>150750</b>



## 2. DRIP IRRIGATION (Per Hectare)

	Particulars	Qty	Specifications	Repayment period (Years)	Grace period (Months)
1.	Wide Spaced	Ha	10x10 m	7	11
2.	Medium Spaced	Ha	2.5x2.5 m	7	11
3.	Close Spaced	Ha	1.2x0.6 m	7	11

(Under PMKSY, it will provide subsidy @55% of the indicative unit cost to small and marginal farmers and @45% to other farmer for encouraging them to install Drip and Sprinkler system)

### Terms & Conditions:

1. The bank should ensure that only a technically competent and approved firm or person designs and installs the system at the field level.
2. The components of the system including pipes should conform to BIS standards.
3. The implementing agency / manufacturers should offer performance guarantee for the operation of the system for a reasonably longer period against any defect either manufacturing/ working or installation.
4. The firms should provide after-sales service to farmer
5. The bank should conduct periodic monitoring visits to assess the performance of the system and take corrective steps, wherever required.







# Plantation and Horticulture

## B. PLANTATION & HORTICULTURE

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (Years)	Gestation Period
1	Mango (Dwarf variety mallika, Amrapali, 5m*5m)	per Acre	108000	12-15	36-48 months
2	Mango-Others (Spacing 10m*10m)	per Acre	66200	12-15	36-48 months
3	Litchi- var. Shahi, Swarn roopa (Spacing 8m*8m)	per acre	63200	10	36-48 months
4	Guava var. Allahabadi Safeda, Lucknow-49 (Spacing 5m*5m)	per acre	74770	10-15	36 months
5	Guava( high density) 03mx03m spacing -1111 plants /hectare	per acre	120000	10-15	36 months
6	Guava (Meadow) 2mx1m spacing-2000 plants	per acre	291950	10-15	36 months
7	Kagji Lime var. Purbi, Kagji Kalaan, Gandarv (spacing- 5m x 5m)	per acre	66000	10-15	48-60 months
8	Papaya var. dwarf, Pusa (Spacing 1.8m*1.8m) - 1100 plants	per acre	100000	3	6 months
9	Pineapple	per acre	110000	4-5	12 months
10	Custard apple var. Bala Nagar (2.5*2.5) 640 plants	per acre	160000	7	48 months
11	Jack fruit var. Khajwa, Ches-1, Ches-2 (8m x 8m)	per acre	75200	12	48-72 months
12	Banana (varieties e.g. Cavendish which need propping, G9)-tissue culture	per acre	170000	4	12 months
13	Amla var. Krishna, Kanchan, N.A-7, N.A-10 (Spacing 8m*8m)	per acre	40000	9	72 months
14	Lemon grass	per acre	63000	3	11 months
15	Cashew Nut var. Vengula-4 (Spacing 8m*8m)	per acre	71200	10	72 months
16	Strawberry (Spacing 20cm*40cm*60cm)	per acre	350000	3	Nil
17	Jamun var. Falena, Kath Jamun (8m x 8m)	per acre	20000	10	36 months
18	Oyster Mushroom	per bed	22000	5	Nil
19	Button Mushroom	250 sq.ft	200000	5	Nil
20	Gladiolus	1 acre	450000	5	12 months
21	Rose (Hybrid) under Green House condition	0.25 acre	1550000	4	12 months
22	Tube Rose	1 acre	100000	3	12 months
23	Jasmine (Bela)	1 acre	65000	4	12 months
24	Gerbera (under Green House condition)	1000 sq. Meter	500000	4	Nil
25	Carnation (under Green House condition)	1000 sq. Meter	380000	4	Nil
26	Bee keeping- Italian Bee	5 colonies	32000	5	Nil
		30 colonies	130000		
27	Pollination service Unit(Italian Bee)	30 colonies	130000	8	12 months
28	Sericulture- Mulberry Plantation, Rearing House, Implements & Rearing of silk worm under irrigated condition	0.5 acre	123000	4	11 months
29	Tasar Silk Composite	0.5 Ha. Tasar plantation (including 0.05 ha chawki garden) and rearing	37000	10	36 months

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (Years)	Gestation Period
30	Tasar Silk - Rearing equipment's in existing plantations 200 DFLs (0.5 Ha) (1 ha)	400 Disease Free Larvae (DFLs)	25000	3	11 months
31	Establishment of Litchi-Guava-Timber multitier cropping system	per ha	358000	8-10	6 months
32	Establishment of Mango-Guava-Timber multitier cropping system	per ha	250000	8-10	6 months

**Terms & Conditions:**

- For all units, a 10% replacement due to mortality rate in the 2nd and 3rd year has been reckoned in the cost.
- Loans under the scheme shall be given to those beneficiaries who have or can arrange assured water supply facilities to irrigate plants in areas where rain-fed cultivation is not possible.
- Loan shall be issued in respect of investments for raising plants during the first year and also for subsequent maintenance, till the plant attains economic bearing stage, or as indicated in the Unit Cost. However, where loans are proposed to be availed of only for the first year planting, it should be ensured that the borrowers have their own resources to meet subsequent year expenditure.
- Suitable inter crops may be taken up during the gestation period of the main crop, wherever feasible.
- The financing bank may consult the State Department of Horticulture or Jharkhand Horticultural Mission (MIDH) to ensure technical feasibility of the crop investment.
- Mixed cropping shall be encouraged, wherever possible for more resilience.
- Working Capital may be issued through KCC as per the guidelines of KCC.
- The bank should ensure/guide the farmers to make necessary arrangements for marketing so that the farmer gets remunerative price. Help of State/District agencies may be sought wherever necessary.
- For Sericulture**, the borrowers may be identified in consultation with the State Department of Sericulture/Central Silk Board, especially in non-traditional zones/districts.
- Improved High Yielding varieties of mulberry and silk worm races may be insisted upon under irrigated conditions.
- The financing bank may ensure that a sound/competitive marketing infrastructure is available in the scheme area and the farmers are not required to transport cocoons to a far-off market.
- For Lac Cultivation**, banks to ensure that the loanee farmer has technical knowledge of Lac Farming. Guidance of NISA, Ranchi may be sought for this purpose.
- Availability of nearby markets/channels for Lac produce should be ensured before financing.



**Detailed Cost Breakup:****1. Mango – Dwarf variety (Mallika, Amrapali etc.)**

Area	1 Acre
Spacing	5m x 5m
No. of plants per Acre	160/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Year 5	Total (₹)
<b>A</b>	<b>Operational Cost</b>								
1	Planting material including 10% extra for gap filling	160	100/- per plant	16000	1600	1600	0	0	19200
2	Farm Yard Manure	kg/Acre	2/- per kg	1600	1600	2000	2400	2800	10400
3	Fertilizers								
a	Nitrogen			700	800	1500	1800	2800	7600
b	Phosphorus			700	1000	1600	2400	3200	8900
c	Potash			500	600	1000	2000	2400	6500
d	Micronutrients			500	1000	1200	1800	2000	6500
4	Plant protection chemicals		200/- per Acre	400	700	900	1050	1750	4800
5	Herbicides/ Growth regulators etc.		200/- per Acre	400	400	400	400	400	2000
6	Power/ Fuel for irrigation		150/- per Acre	600	600	600	600	600	3000
7	Tools and implements			1000					1000
8	Miscellaneous items			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>23400</b>	<b>9300</b>	<b>11800</b>	<b>13450</b>	<b>16950</b>	<b>74900</b>
<b>B</b>	<b>Capital Cost</b>								
1	Clearing of land	5 Man days	300/- per day	1500					1500
2	Land preparation( soil working)		2000/- per Acre	2000					2000
3	Digging of pits	8 Man days	300/- per day	2400	900	900			4200
4	Filling of pits	4 Man days	300/- per day	1200	600	600			2400
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000					3000
6	Fencing Material			15000					15000
7	Miscellaneous expenses			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>26100</b>	<b>2500</b>	<b>2500</b>	<b>1000</b>	<b>1000</b>	<b>33100</b>
	<b>Total</b>			<b>49500</b>	<b>11800</b>	<b>14300</b>	<b>14450</b>	<b>17950</b>	<b>108000</b>

**2. Mango – Others (Chausa, Dasherri etc.)**

Area	1 Acre
Spacing	10m x 10m
No. of plants per Acre	40/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Year 5	Total (₹)
<b>A</b>	<b>Operational Cost</b>								
1	Planting material including 10% extra for gap filling	40	100/- per plant	4000	400	400	0	0	4800
2	Farm Yard Manure	kg/Acre	2/- per kg	400	400	500	625	775	2700
3	Fertilizers								
a	Nitrogen			350	400	750	900	1400	3800
b	Phosphorus			350	500	800	1200	1600	4450
c	Potash			250	300	500	1000	1200	3250
d	Micronutrients			250	500	600	900	1000	3250
4	Plant protection chemicals		200/- per Acre	400	600	800	950	1300	4050
5	Herbicides/ Growth regulators etc.		200/- per Acre	400	400	400	400	400	2000
6	Power/ Fuel for irrigation		150/- per Acre	600	600	600	600	600	3000
7	Tools and implements			1000					1000
8	Miscellaneous items			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>9000</b>	<b>5100</b>	<b>6350</b>	<b>7575</b>	<b>9275</b>	<b>37300</b>
<b>B</b>	<b>Capital Cost</b>								
1	Clearing of land	5 Man days	300/- per day	1500					1500
2	Land preparation( soil working)		2000/- per Acre	2000					2000
3	Digging of pits (main & borders)	2 Man days	300/- per day	600	300	300			1200
4	Filling of pits	2 Man days	300/- per day	600	300	300			1200
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000					3000
6	Fencing Material			15000					15000
7	Miscellaneous expenses			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>23700</b>	<b>1600</b>	<b>1600</b>	<b>1000</b>	<b>1000</b>	<b>28900</b>
	<b>Total</b>			<b>32700</b>	<b>6700</b>	<b>7950</b>	<b>8575</b>	<b>10275</b>	<b>66200</b>

### 3. Litchi

Area	1 Acre
Spacing	8m x 8m
No. of plants per Acre	60/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Year 5	Total (₹)
<b>A</b>	<b>Operational Cost</b>								
1	Planting material including 10% extra for gap filling	60	60/- per plant	3600	360	360			4320
2	Farm Yard Manure	kg/ Acre	2/- per kg	600	600	750	950	1200	4100
3	Fertilizers								
a	NPK			280	560	840	1120	1400	4200
b	Micronutrients			330	660	990	1320	1650	4950
4	Plant protection chemicals		200/- per Acre	350	600	750	930	1200	3830
5	Herbicides/ Growth regulators etc.		200/- per Acre	400	800	800	800	800	3600
6	Power/ Fuel for irrigation		150/- per Acre	600	600	600	600	600	3000
7	Tools and implements			1000					1000
8	Miscellaneous items			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>8160</b>	<b>5180</b>	<b>6090</b>	<b>6720</b>	<b>7850</b>	<b>34000</b>
<b>B</b>	<b>Capital Cost</b>								
1	Clearing of land	5 Man days	300/- per day	1500					1500
2	Land preparation( soil working)		2000/- per Acre	2000					2000
3	Digging of pits (main & borders)	3 Man days	300/- per day	900	300	300			1500
4	Filling of pits	2 Man days	300/- per day	600	300	300			1200
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000					3000
6	Fencing Material			15000					15000
7	Miscellaneous expenses			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>24000</b>	<b>1600</b>	<b>1600</b>	<b>1000</b>	<b>1000</b>	<b>29200</b>
	<b>Total</b>			<b>32160</b>	<b>6780</b>	<b>7690</b>	<b>7720</b>	<b>8850</b>	<b>63200</b>

## 4. Guava

Area	1 Acre
Spacing	5m x 5m
No. of plants per Acre	160/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Total (₹)
<b>A</b>	<b>Operational Cost</b>							
1	Planting material including 10% extra for gap filling	160	60/- per plant	9600	960	960	0	11520
2	Farm Yard Manure	kg/ Acre	2/- per kg	1600	1600	2000	2500	7700
3	Fertilizers							
a	NPK			720	1440	2160	2880	7200
b	Micronutrients			330	660	990	1320	3300
4	Plant protection chemicals		200/- per Acre	400	600	800	950	2750
5	Herbicides/ Growth regulators etc.		200/- per Acre	400	800	800	800	2800
6	Power/ Fuel for irrigation		150/- per Acre	600	600	600	600	2400
7	Tools and implements			1000				1000
8	Miscellaneous items			1000	1000	1000	1000	4000
	Sub Total			15650	7660	9310	10050	42670
<b>B</b>	<b>Capital Cost</b>							
1	Clearing of land	5 Man days	300/- per day	1500				1500
2	Land preparation( soil working)		2000/- per Acre	2000				2000
3	Digging of pits (main & borders)	8 Man days	300/- per day	2400	900	900		4200
4	Filling of pits	4 Man days	300/- per day	1200	600	600		2400
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000				3000
6	Fencing Material			15000				15000
7	Miscellaneous expenses			1000	1000	1000	1000	4000
	Sub Total			26100	2500	2500	1000	32100
	Total			41750	10160	11810	11050	74770



## 5. Guava - Meadow

Area	1 Acre
Spacing	2m x 1m
No. of plants per Acre	2000/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Total (₹)
<b>A</b>	<b>Operational Cost</b>							
1	Planting material including 10% extra for gap filling	2000	60/- per plant	120000	12000	12000		144000
2	Farm Yard Manure	kg/ Acre	2/- per kg	8000	10000	12500	15600	46100
3	Fertilizers							
a	NPK			2160	4320	6480	8640	21600
b	Micronutrients			330	660	990	1320	3300
4	Plant protection chemicals		200/- per Acre	400	600	800	950	2750
5	Herbicides/ Growth regulators etc.		200/- per Acre	400	800	800	800	2800
6	Power/ Fuel for irrigation		150/- per Acre	600	600	600	600	2400
7	Tools and implements			1000				1000
8	Miscellaneous items			1000	1000	1000	1000	4000
	<b>Sub Total</b>			<b>133890</b>	<b>29980</b>	<b>35170</b>	<b>28910</b>	<b>227950</b>
<b>B</b>	<b>Capital Cost</b>							
1	Clearing of land	5 Man days	300/- per day	1500				1500
2	Land preparation( soil working)		2000/- per Acre	2000				2000
3	Digging of pits (main & borders)	70 Man days	300/- per day	21000	2000	2000		25000
4	Filling of pits	35 Man days	300/- per day	10500	1500	1500		13500
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000				3000
6	Fencing Material			15000				15000
7	Miscellaneous expenses			1000	1000	1000	1000	4000
	<b>Sub Total</b>			<b>54050</b>	<b>4500</b>	<b>4500</b>	<b>1000</b>	<b>64000</b>
	<b>Total</b>			<b>187940</b>	<b>34480</b>	<b>39670</b>	<b>29910</b>	<b>291950</b>

## 6. Papaya

Area	1 Acre
Spacing	1.8m x 1.8m
No. of plants per Acre	1100/Acre

S.N.	Particulars	Unit	Rate (₹)	Total (₹)
<b>A</b>	<b>Operational Cost</b>			
1	Planting material including 10% extra for gap filling	1100	20/- per plant	22000
2	Farm Yard Manure	kg/ Acre	2/- per kg	22000
3	Fertilizers			
a	NPK			17290
b	Micronutrients			500
4	Plant protection chemicals		200/- per Acre	400
5	Herbicides/ Growth regulators etc.		200/- per Acre	400
6	Power/ Fuel for irrigation		150/- per Acre	600
7	Tools and implements			1000
8	Miscellaneous items			2000
	Sub Total			66190
<b>B</b>	<b>Capital Cost</b>			
1	Clearing of land	5 Man days	300/- per day	1500
2	Land preparation( soil working)		2000/- per Acre	2000
3	Digging of pits (main & borders)	22 Man days	300/- per day	6600
4	Filling of pits	11 Man days	300/- per day	3300
5	Labour for Fencing /Trenching	10 Man days	341/- per day	3410
6	Fencing Material			15000
7	Miscellaneous expenses			2000
	<b>Sub Total</b>			<b>33810</b>
	<b>Total</b>			<b>100000</b>

## 7. Lemongrass

Area	1 Acre
No. of slips per Acre	20000/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Total (₹)
<b>A</b>	<b>Operational Cost</b>					
1	Planting material including 10% extra for gap filling	20000	1/- per slips	20000	2000	22000
2	Farm Yard Manure	kg/ Acre	2/- per kg	12000		12000
3	Fertilizers					
a	NPK			2100		2100
b	Micronutrients			900	900	1800
4	Plant protection chemicals		200/- per Acre	500		500
5	Herbicides/ Growth regulators etc.		200/- per Acre	400		400
6	Power/ Fuel for irrigation		150/- per Acre	400	400	800
7	Tools and implements			600	300	900
8	Miscellaneous items			1000		1000
	<b>Sub Total</b>			<b>37900</b>	<b>3600</b>	<b>41500</b>
<b>B</b>	<b>Capital Cost</b>					
1	Clearing of land	5 Man days	300/- per day	1500		1500
2	Land preparation( soil working)		2000/- per Acre	2000		2000
3	Planting	20 Man days	300/- per day	6000		6000
4	Fencing Material			10000		10000
5	Miscellaneous expenses			1000	1000	2000
	<b>Sub Total</b>			<b>20500</b>	<b>1000</b>	<b>21500</b>
	<b>Total</b>			<b>58400</b>	<b>4600</b>	<b>63000</b>

## 8. Cashew Nut

Area	1 Acre
Spacing	8m x 8m
No. of plants per Acre	60/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total (₹)
<b>A</b>	<b>Operational Cost</b>									
1	Planting material including 10% extra for gap filling	60	40/- per plant	2400	240	240				2880
2	Farm Yard Manure	kg/ Acre	2/- per kg	1200	1200	1500	1875	2350	3000	11125
3	Fertilizers									
a	NPK			250	500	750	1000	1250	1250	5000
b	Micronutrients			500	500	500	500	500	500	3000
4	Plant protection chemicals		200/- per Acre	400	600	800	950	1300	1500	5550
5	Herbicides/ Growth regulators etc.		200/- per Acre	400	800	800	800	800	800	4400
6	Power/ Fuel for irrigation		150/- per Acre	300	300	300	300	300	300	1800
7	Tools and implements			1000						1000
8	Miscellaneous items			1000	1000	1000	1000	1000	1000	6000
	<b>Sub Total</b>			<b>7450</b>	<b>5140</b>	<b>5890</b>	<b>6425</b>	<b>7500</b>	<b>8350</b>	<b>40755</b>
<b>B</b>	<b>Capital Cost</b>									
1	Clearing of land	5 Man days	349/- per day	1745						1745
2	Land preparation( soil working)		2000/- per Acre	2000						2000
3	Digging of pits (main & borders)	3 Man days	300/- per day	900	300	300				1500
4	Filling of pits	2 Man days	300/- per day	600	300	300				1200
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000						3000
6	Fencing Material			15000						15000
7	Miscellaneous expenses			1000	1000	1000	1000	1000	1000	6000
	<b>Sub Total</b>			<b>24245</b>	<b>1600</b>	<b>1600</b>	<b>1000</b>	<b>1000</b>	<b>1000</b>	<b>30445</b>
	<b>Total</b>			<b>31695</b>	<b>6740</b>	<b>7490</b>	<b>7425</b>	<b>8500</b>	<b>9350</b>	<b>71200</b>



## 9. Jack Fruit

Area	1 Acre
Spacing	8m x 8m
No. of plants per Acre	60/Acre

S.N.	Particulars	Unit	Rate (₹)	Year 1	Year 2	Year 3	Year 4	Year 5	Total (₹)
<b>A</b>	<b>Operational Cost</b>								
1	Planting material including 10% extra for gap filling	60	40/- per plant	2400	240	240			2880
2	Farm Yard Manure	kg/ Acre	2/- per kg	1200	2400	3600	4800	6000	18000
3	Fertilizers								
a	NPK			470	940	1410	1880	2350	7050
d	Micronutrients			330	660	990	1320	1650	4950
4	Plant protection chemicals		200/- per Acre	400	600	800	950	1250	4000
5	Herbicides/ Growth regulators etc.		200/- per Acre	200	400	400	400	400	1800
6	Power/ Fuel for irrigation		150/- per Acre	300	300	300	300	300	1500
7	Tools and implements			1000					1000
8	Miscellaneous items			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>7300</b>	<b>6540</b>	<b>8740</b>	<b>10650</b>	<b>12950</b>	<b>46180</b>
<b>B</b>	<b>Capital Cost</b>								
1	Clearing of land	5 Man days	264/- per day	1320					1320
2	Land preparation( soil working)		2000/- per Acre	2000					2000
3	Digging of pits (main & borders)	3 Man days	300/- per day	900	300	300			1500
4	Filling of pits	2 Man days	300/- per day	600	300	300			1200
5	Labour for Fencing /Trenching	10 Man days	300/- per day	3000					3000
6	Fencing Material			15000					15000
7	Miscellaneous expenses			1000	1000	1000	1000	1000	5000
	<b>Sub Total</b>			<b>23820</b>	<b>1600</b>	<b>1600</b>	<b>1000</b>	<b>1000</b>	<b>29020</b>
	<b>Total</b>			<b>31120</b>	<b>8140</b>	<b>10340</b>	<b>11650</b>	<b>13950</b>	<b>75200</b>







## C. FARM FORESTRY

### Detailed Cost Breakup:

#### 1. Cultivation of Bamboo

S. No	PARTICULARS	UNIT	Cost (₹) per year					TOTAL (₹)
			1	2	3	4	5	
1	Land preparation	10 Man Days	3000					3000
2	Digging of pits and refilling of pits after mixing FYM, Fertilizer & insecticides @20 pits/MD & 80 pits/MD	25 Man Days & 10 Man Days	7500	3000				10500
3	Planting & staking	15 Man Days & 05 Man Days	4500	1500	1500	1500	1500	10500
4	Cost of FYM @3 Kg/pit	2.5/Kg	3000	3000	3000	3000	3000	15000
5	Cost of insecticides / pesticides	Lump Sum	2500	2500	2500	2500	2500	12500
6	Cost of plants including transport(400,80)	15.00/ plant	6000	1200				7200
7	Planting & replanting @ 50 plants per MD.	8 & 2 Man Days	2400	600				2985
8	Weeding(thrice in first year and twice in second & third year)	7 Man Days per Weeding	6300	4200	4200	0	0	14700
9	Soil working	10 Man Days per working	3000	3000	3000	3000	0	12000
10	Irrigation during dry months	Lump Sum	3500	3500	3500	3500	3500	10000
11	Pruning from third year	15 Man Days				4500	4500	9000
12	SUB TOTAL	₹	41700	22500	17700	18000	15000	107385
13	CONTINGENCY 5 %	₹	2085	1125	885	900	750	5369.25
14	GRAND TOTAL	₹	43785	23625	18585	18900	15750	120645
Proposed unit Cost- ₹1,20,645/- (capitalized up to 5th year)								

#### Techno - economic parameters

- Spacing of 5.0 m x 5.0 m has been adopted.
- The number of trees to be planted are 400 per hectare.
- Survival is considered at 80% with 20% casualty replacement.
- Lifesaving irrigation to be given during the first three years.
- Repayment period is 10 year with grace period of 6 years.

**2. Eucalyptus Cultivation (sp. tereticornis) clonal var.**

S. No.	PARTICULARS OF WORKS	UNIT	Cost (₹) per year				Total(₹)
			1	2	3	4	
1	Land preparation	10 Man Days	3000	3000			6000
2	Digging of pits(30x30x30 cm) and refilling of pits after mixing FYM, Fertilizer & insecticides @ (30 pits/MD & 100 pits/MD )	80 Man Days & 20 Man Days	24000	6000	0	0	30000
3	Cost of FYM @3 Kg/pit	₹2.5/Kg	18750	0	0	0	18750
4	Cost of fertilizer @100 gm/plant	₹7/Kg	1960	1960	0	0	3920
5	Cost of insecticides / pesticides	Lump Sum	500	500	0	0	1000
6	Cost of plants including transport(1667,500)	₹15.00/ plant	25005	7500	0	0	32505
7	Planting & replanting @ 100 plants per MD.	25 & 5 Man Days	7500	1500	0	0	9000
8	Weeding(3,2,1)	5 Man Days per Weeding	4500	3000	1500	0	9000
9	Soil working (1 working in the 1st year and 2 working in second year)	5 Man Days per working	1500	3000	0	0	4500
10	Irrigation during dry months	Lump Sum	1500	1500	1500	0	4500
	<b>SUB TOTAL</b>	<b>₹</b>	<b>88215</b>	<b>27960</b>	<b>3000</b>	<b>0</b>	<b>119175</b>
	<b>CONTINGENCY 5 %</b>	<b>₹</b>	<b>4410.75</b>	<b>1398</b>	<b>150</b>	<b>0</b>	<b>5958.75</b>
	<b>GRAND TOTAL</b>	<b>₹</b>	<b>92626</b>	<b>29358</b>	<b>3150</b>	<b>0</b>	<b>125134</b>
Proposed unit Cost-₹125134/- (capitalized upto 04th year)							

**Techno - economic parameters**

- Spacing of 3.0 m x 2.0 m has been adopted.
- The number of trees to be planted are 1667 per hectare.
- Survival is considered at 80% with 20% casualty replacement.
- Lifesaving irrigation to be given during the first three years.
- Poles are ready to harvest after about 4 years.
- Repayment period is 7 years with grace period of 6 years.

**Terms & Conditions:**

1. The bank shall satisfy itself that the planting materials of the required quantity and quality are procured by beneficiary from reliable sources such as nurseries of State Universities or State Govt. or any other nurseries approved by the concerned department of the State Govt. etc.
2. Farmers should be encouraged to take up agroforestry activities (like intercropping) particularly in the initial years to ensure steady flow of cash to the farmer
3. For Bamboo cultivation, farmers should be encouraged to avail the facilities under National Bamboo Mission to ensure value chain integration and marketing benefits.









# Rearing Of Beneficial Insects

## D. REARING OF BENEFICIAL INSECTS

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (Years)	Gestation Period
1	Beekeeping- Italian Bee	5 Colonies	32000	5	Nil
		30 Colonies	130000		
2	Pollination service unit (Italian bee)	30 Colonies	130000	8	12 months
3	Sericulture- Mulberry Cultivation; 300 DFLs per crop x 2 during first year and 5 crops second year onwards	300 DFLs	Investment cost= ₹ 643000 Chawkie Rearing Centre= ₹ 1637300	4	11 months
4	Tasar Silk Composite	0.5 Ha. Tasar plantation (including 0.05 ha chawki garden) and rearing	37000	10	36 months
5	Tasar Silk - Rearing equipment's in existing plantations 200 DFLs (0.5 Ha)	400 Disease Free Larvae (DFLs) (1 ha)	25000	3	11 months



Silkworm used for Tasar Silk Rearing





# LAC Cultivation

## LAC Cultivation

1	Lac Cultivation	Unit Size	Rate (₹)	Repayment Period	Gestation Period
a.	Kusmi Lac Cultivation on Kusum Tree	70 Trees	299900	4-5	24 Months
b.	Kusmi Lac Cultivation on Kusum Tree	50 Trees	157600	4-5	24 Months
c.	Kusmi lac cultivation on Ber	100 Trees	104900	4-5	12 Months
d.	Kusmi lac cultivation on Ber	50 Trees	54100	4-5	12 Months
e.	Kusmi lac cultivation on Flemingia semialata	One acre (3200 plants)	158200	4-5	12 Months
f.	Kusmi lac cultivation on Flemingia semialata	0.25 acre (1000 plants)	70400	4-5	12 Months
g.	Rangeeni lac cultivation on Palas	100 Trees	57300	8-9	12 Months
h.	Lac processing with composite plan with six month operating cost	Small Scale Lac Processing Unit (SSLPU)	623800	3-4	6 Months
i.	Lac processing with composite plan with six month operating cost	Integrated Small Scale Lac Processing Unit (ISSLPU)	827200	3-4	6 Months
j.	Tassar and lac cultivation on Ber	100 trees	177500	4-5	12 Months

### Terms & Conditions:

- For Sericulture, the borrowers may be identified in consultation with the State Department of Sericulture/Central Silk Board, especially in non-traditional zones/districts.
- Improved High Yielding varieties of mulberry and silk worm races may be insisted upon under irrigated conditions.
- The financing bank may ensure that a sound/competitive marketing infrastructure is available in the scheme area and the farmers are not required to transport cocoons to a far-off market.
- For Lac Cultivation, banks to ensure that the loanee farmer has technical knowledge of Lac Farming. Guidance of NISA, Ranchi may be sought for this purpose.
- Availability of nearby markets/channels for Lac produce should be ensured before financing.

### Detailed Cost Breakup:

#### 1. Economics of Kusmi Lac Cultivation on 70 Kusum (Schleichera oleosa) trees

Economics of kusmi lac cultivation on kusum (Schleichera oleosa) trees (70 tree / ha - 12 x 12m)		70 lac host trees
A. Fixed Cost (Training& consultancy charges, tools and implements, etc.)	Annual Depreciation(₹)	5606
	Annual Interest on fixed capital(₹)	5961
	Sub-total (₹)	11567
B. Variable cost	Labour cost (₹)	45000
	Other inputs including Broodlac, pesticides, manures and fertilizers, etc. (₹)	104355
	Sub-total (₹)	149355
<b>Total Cost (A+B) (₹)</b>		<b>299929</b>
<b>Rounded Off (₹)</b>		<b>299900</b>
C. Gross income	(₹)	476000
D. Net returns	(₹)	315000
E. Repayment period	(Yrs)	4-5 Years
F. Gestation Period	(Months)	24 Months

## 2. Economics of Kusmi Lac Cultivation on 625 Ber (*Ziziphus mauritiana*) trees

Economics of kusmi lac cultivation on ber ( <i>Ziziphus mauritiana</i> ) trees (625 tree / ha - 4 x 4m)	625 lac host trees	
A. Fixed Cost (Training& consultancy charges, tools and implements, etc.) (₹)	18381	2941
	37494	5999
	55875	8940
B. Variable cost (₹)	81000	40000
	266686	55990
	347686	95990
Total Cost (A+B) (₹)	<b>403561</b>	
Rounded Off (₹)	<b>404000</b>	
C. Gross income (₹)	946450	177500
D. Net returns (₹)	542450	72570
E. Repayment period	4-5 Years	4-5 Years
F. Gestation Period	12 Months	12 Months

## 3. Economics of Kusmi lac cultivation on 3200 *Flemingia semialata* in one acre area

Economics of kusmi lac cultivation on <i>Flemingia semialata</i> in one acre area (3200 plants/ Acre)	One acre area (3200 plants/ Acre)	
A. Fixed Cost (Training& consultancy charges, tools and implements, land levelling, nursery raising, transplanting, irrigation, etc.)	Annual Depreciation(₹)	12219
	Annual Interest on fixed capital(₹)	30113
	Sub-total (₹)	42332
B. Variable cost	Labour cost (₹)	74000
	Other inputs including Broodlac, pesticides, manures and fertilizers, etc. (₹)	106600
	Sub-total (₹)	180600
<b>Total Cost (A+B) (₹)</b>	<b>158231</b>	
<b>Rounded Off (₹)</b>	<b>158200</b>	
C. Gross income	(₹)	686800
D. Net returns	(₹)	463800
E. Repayment period	(Yrs)	4-5 Years
F. Gestation Period	(Months)	12 Months

#### 4. Economics of rangeeni lac cultivation on 100 Palas (Butea monosperma) trees

Economics of rangeeni lac cultivation on 100 Palas (Butea monosperma) trees (771 tree/ha- 3.6x3.6m)		771 lac host trees
A. Fixed Cost (Training& consultancy charges, tools and implements, etc.)	Annual Depreciation(₹)	12385
	Annual Interest on fixed capital(₹)	12385
<b>Sub-total (₹)</b>		<b>24770</b>
B. Variable cost	Labour cost (₹)	45000
	Other inputs including Broodlac, pesticides, manures and fertilizers, etc. (₹)	230080
<b>Sub-total (₹)</b>		<b>275080</b>
<b>Total Cost (A+B) (₹)</b>		<b>57288</b>
<b>Rounded Off (₹)</b>		<b>57300</b>
C. Gross income	(₹)	511700
D. Net returns	(₹)	211700
E. Repayment period	(Yrs.)	8-9 Years
F. Gestation Period	(Months)	12 Months

#### 5. Lac processing with composite plan (Capacity of 100kg sticklac /day) with six month operating cost

Lac processing with composite plan (Capacity of 100kg sticklac /day) with six month operating cost		Small Scale Lac Processing Unit (SSLPU)
A. Fixed Cost (Building & other basic facilities)	Annual Depreciation(₹)	25000
	Annual Interest on fixed capital (₹)	50000
	Cost of Lac Processing Unit (one Time) (₹)	212400
	<b>Sub-total(₹)</b>	<b>287400</b>
B. Variable cost (@Raw material i.e. sticklac (about ₹36 lakh) will be supplied from the group of farmers including JLGs, PGs, SHGs, FPOs/FPCs, etc.)	Labour cost (₹)	225000
	Other inputs (₹)	111400
	<b>Sub-total (₹)</b>	<b>3364000</b>
<b>Total Cost (A+B) (₹)</b>		<b>623800</b>
C. Gross income including main product plus by-products like lac dye, molamma, patti ,reti, ghongi, etc.	(₹)	4515600
D. Net returns (Only seedlac making plus by-products like molamma, patti, reti, ghongi, etc.)	(₹)	243800
E. Repayment period	(Yrs.)	3-4 Years
F. Gestation Period	(Months)	6 Months



NABARD has supported plantation of Semialata plants and inoculation of lac under Tribal Development Fund.



## 6. Indicative Unit Cost for DFL-300 (DFLs) per crop x 2 crops during first year and 5 crops from second year onwards

S.No	Particulars	Amount (₹)
A	Farm Sector	50,000
1	Sericulture (Mulberry cultivation V1 variety with one year maintenance)	5,00,000
2	Construction of rearing shed (50ft, 20ft, 15ft)	75,000
3	Purchase of rearing equipment	18,000
4	Rearing cost	
	<b>Total Investment Cost (₹)</b>	<b>6,43,000</b>

Chawkie Rearing Centre:

S.No	Details	Unit size	Amount (₹)
1	Mulberry garden establishment	2 acre	1,20,000
2	Rearing equipments	5000 DFLs per batch	6,17,000
3	Rearing house & incubation chamber	1000 sft+200 sft	7,20,000
4	Rearing cost for first batch		1,80,300*
	<b>Total Cost (₹)</b>		<b>16,37,300</b>

\*Rearing cost per batch is ₹ 60,100 and considering capitalisation of 03 batch amounting to ₹ 1,80,300/-

### Financial viability and bankability of chawkie rearing of 5000 DFLs/batch:

- IRR - 89%
- BCR-1.35:1
- Repayment period - 4 years with 6 months moratorium
- Margin money considered - 25% of TFO



Life Cycle of Silk Worms







# Dairy Development

## E. DAIRY DEVELOPMENT

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months) – 1 to 2 lactation
1	Improved Indigenous cows/CB Cows with an average milk yield 8 to 10 LPD with Shed	2	230050	3-7	Nil
2	Improved Indigenous cows/CB Cows with an average milk yield 8 to 10 LPD with Shed	5	542201	3-7	Nil
3	Improved Indigenous cows/CB Cows with an average milk yield 8 to 10 LPD with Shed	10	1205769	3-7	Nil
4	Improved Indigenous cows/CB Cows with an average milk yield 8 to 10 LPD with Shed	20	2341538	3-7	Nil
5	Improved Indigenous cows/CB Cows with an average milk yield 8 to 10 LPD with Shed	50	5768845	3-7	Nil
6	Graded Murrah buffaloes with an average milk yield of 8LPD)	2	170000	5	Nil
7	Graded Murrah buffaloes with an average milk yield of 8LPD	5	425000	5	Nil
8	CB-Heifer Unit of 15 Month age	5	170000	3-7	27 Months
9	CB-Heifer Unit of 15 Month age	2	67500	3-7	27 Months
10	CB-Heifer Unit of 15 Month age – with shed	2	97500	3-7	27 Months

\* Assumption: Milch animals are procured at the start of the project.

1. The bank shall finance under the scheme only good quality animals preferably freshly calved animals in second or third lactation, yielding an average 8-10 litres of milk per day.
2. The bank shall select areas/localities keeping in view the compactness of the area to facilitate supervision and nearness of villages to veterinary dispensaries, animal breeding centres and milk marketing facilities.
3. The bank shall ensure that animals are purchased with an interval of about 4-6 months to ensure continuity in milk production.
4. The bank shall finance under the scheme only good quality animals viz. Graded Murrah buffaloes / Cross bred cows, preferably freshly calved animals in second or third lactation.
5. Banks should ensure availability of green fodder in the project area.
6. Banks may issue KCCs to farmers to take care of the feed requirement during dry days.
7. Immediately after purchase, suitable arrangements for identification of animals by tattooing or ear tagging shall be made with the help of State/District Animal Husbandry Department. In addition to this, the record of particulars of the animal identification (colour, birth marks, etc.) shall be maintained.
8. Certificate regarding age, milk production and health of animals financed shall be obtained from qualified veterinary assistant surgeon.
9. Adequate insurance cover is to be obtained for all animals purchased under the scheme.
10. Animals should be vaccinated with the help of the Veterinary Department, against diseases such as Rinderpest, Haemorrhagic Septicaemia and Foot & Mouth disease, depending upon prevalence of particular diseases in the area and as per the advice of the State Animal Husbandry Department.
11. The bank shall satisfy itself that suitable and satisfactory arrangements exist for marketing of milk. Such arrangements could either be in the nature of organized marketing through milk collection centres or outlet for direct sale of milk at a remunerative price.
12. Wherever an arrangement is made to market milk through organized system, the bank may make arrangements with the milk collection agencies for loan recoveries out of sale proceeds. The state sponsored Dairies of MEDHA and SUDHA may be roped in for this purpose.

**Detailed Cost Breakup:**

Sr.	Particulars	Unit Cost (₹)				
		2 Milch Cattle Unit	5 Milch Cattle Unit	10 Milch Cattle Unit	20 Milch Cattle Unit	50 Milch Cattle Unit
1	Cross Breed Cows like Jersey / Improved Indigenous Breed Cows like Sahiwal, Red Sindhi & Tharparkar	120000	300000	600000	1200000	3000000
2	Cattle Shed @ ₹ 200 Per sq. ft. (Requirement of 120 sq. ft. for 2 Cattle Unit) – Pucca shed as per MNREGA specification	71000	150576	302519	605038	1512595
3	Insurance @ 11.5% premium (for 3 years)	13800	34500	69000	138000	345000
4	Medicine & Vet Expenses	2000	5000	10000	20000	50000
5	Milking Bucket and Other Materials	1250	3125	6250	12500	31250
6	Feed Cost (for 1 month, ₹ 5000/animal)	10000	25000	50000	100000	250000
7	Milching Machine (@ 1,20,000/Machine) – 4 bucket milking	0	0	120000	120000	240000
8	Milk Van/Motorcycle	0	0	0	50000	100000
9	Labour Cost (@ ₹ 12,000/person/month)– residential labour	12000	24000	48000	96000	240000
	<b>Total</b>	<b>230050</b>	<b>542201</b>	<b>1205769</b>	<b>2341538</b>	<b>5768845</b>





# Pig Rearing

## F. PIG REARING

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months)
1	Rearing of cross breed	(4+1 unit)	122000	5	15 months
2	Rearing of cross breed	(6+1 unit)	175000	5	15 months
3	Breeding of Improved/Cross Bred Pig Breed	(10+2 unit)	328000	5	15 months

### Terms & Conditions:

1. The Bank shall finance purchase of only good quality piglets of exotic breeds like large white Yorkshire or good quality cross breed piglets etc. in the age group of 2 months from reputed farms.
2. Immediately after purchase, suitable arrangements for identification of animals by ear tagging shall be made with the help of District Animal Husbandry Department. In addition to this, the record of particulars of the animal identification shall be maintained.
3. The unit shall be insured immediately after the purchase of piglets and the documents assigned in favour of the Bank.
4. Certificate regarding age and health of piglets financed shall be obtained from a qualified Veterinary Assistant Surgeon.
5. Animals shall be got vaccinated against diseases like Swine fever etc. with the help of Veterinary Department/ Agricultural Department
6. The Bank should ensure that adequate marketing arrangements are available for selling the fattened pigs at a remunerative price.
7. The Bank should ensure that adequate facilities are available for transporting the garbage to the farm site on regular basis.
8. Beneficiaries should undergo training in good husbandry practices to ensure upkeep of the firm.
9. Bio gas plant should be insisted upon with piggery units.
10. During periodical inspection, the bank shall satisfy itself that utmost cleanliness and hygienic conditions are maintained in the piggery farm.

### Detailed Cost Breakup:

#### 1. Pig Rearing /Breeding unit (4+1 piglets)

Sl. No.	Particulars	Cost (₹)
1	Piglets – 4 Sows + 1 Boars (4 months old & 40 Kg) @ ₹ 6600/sow and ₹ 11000/boar	37400
2	Pig fattener shed 20*4 sq.ft. @ ₹200/sq.ft	16000
3	Farrowing pen at 80 sq. ft per sow for 1 sows at ₹ 165 per sq. ft (considering always 40% of pigs in farrowing)	13200
4	Feeding cost	
4.a	Concentrate feed – for 6 months @ ₹22/Kg (0.9 Kg/day/animal)	24300
4.b	Kitchen/Vegetable Waste Feed - for 6 months @ ₹1.5/Kg (6 Kg/day/animal)	8100
5	Insurance @8%	2992
6	Medicine & Misc. @ ₹100/Piglet	500
7	Biogas plant	20000
	<b>Total</b>	<b>122492</b>
	<b>Rounded Off</b>	<b>122000</b>

**2. Pig Rearing unit (6+1 piglets)**

Sl. No.	Particulars	Cost (₹)
1	Piglets – 6 Sows + 1 Boars (4 months old & 30-40 Kg) @ ₹ 6600/sow and ₹ 11000/boar	50600
2	Pig fattener shed 20*7 sq.ft. @ ₹200/sq.ft	28000
3	Farrowing pen at 80 sq. ft per sow for 2 sows at ₹ 165 per sq. ft (considering always 40% of pigs in farrowing)	26400
4	Feeding cost	
4.a	Concentrate feed – for 6 months @ ₹22/Kg (0.9 Kg/day/animal)	34020
4.b	Kitchen/Vegetable Waste Feed - for 6 months @ ₹1.5/Kg (6 Kg/day/animal)	11340
5	Insurance @8%	4048
6	Medicine & Misc. @ ₹100/Piglet	700
7	Biogas plant	20000
	<b>Total</b>	<b>175108</b>
	<b>Rounded Off</b>	<b>175000</b>

**3. Pig Rearing unit (10+2 piglets)**

Sl. No.	Particulars	Cost (₹)
1	Piglets – 10 Sows + 2 Boars (4 months old & 40 Kg) @ ₹ 6600/sow and ₹ 11000/boar	88000
2	Pig fattener shed 20*12 sq.ft. @ ₹200/sq.ft.	48000
3	Farrowing pen at 80 sq. ft per sow for 4 sows at ₹ 165 per sq. ft. (considering always 40% of pigs in farrowing)	52800
4	Feeding cost	
4.a	Concentrate feed – for 6 months @ ₹30/Kg (0.9 Kg/day/animal)	58320
4.b	Kitchen/Vegetable Waste Feed - for 6 months @ ₹1.5/Kg (6 Kg/day/animal)	19440
5	Labour Cost @ ₹ 5500/month for 6 months	33000
6	Insurance @8%	7040
7	Medicine & Misc. @ ₹100/Piglet	1200
8	<b>Biogas plant</b>	<b>20000</b>
	<b>Total</b>	<b>327800</b>
	<b>Rounded Off</b>	<b>328000</b>



# Goat Rearing

## G. GOAT REARING

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months) – 1 to 2 lactation
1	Goat rearing (10 does + 1 Buck) - Black Bengal Crosses - Open Grazing	10+1	57000	5	18 months
2	Goat rearing (20 does + 1 Buck) - Black Bengal Crosses - Open Grazing	20+1	110000	5	18 months
3	Goat rearing (10 does + 1 Buck) - Black Bengal Crosses - Stall Feeding in Bamboo Made Raised Platform (20 feet L x 2 feet W x 1 foot H)	10+1	81000	5	18 months
4	Local breed Unit size: (Black Bengal) goats with bamboo made house (15 feet L x 10 feet W x 8 feet H)	20+1	172000	5	18 months
5	Shelter feed vaccination centre for (10+1) Unit	One	25000	5	18 months

### Terms & Conditions:

- The Bank shall finance only good quality animals of about 6 months to 1-year-old.
- All animals financed shall be tattooed or ear tagged for proper identification.
- Certificate regarding age and health of animals financed shall be obtained from a qualified Veterinary Assistant Surgeon.
- Animals shall be got vaccinated against diseases with the help of Veterinary Department.
- The units may be periodically visited by the Agricultural Officer who should maintain a follow up register on maintenance of animals given and young ones produced.
- For Stall Fed Animals, the bank should satisfy itself that beneficiaries have fodder trees/ Grasses in the farm to meet the green fodder requirements.
- The bank shall ensure that no animal is disposed-off or sold by the beneficiary, without its prior permission in writing, till the loan is fully repaid.
- Adequate training of beneficiary on good husbandry practices is to be ensured.

### Detailed Cost Breakup:

#### 1. Goat rearing (10 does + 1 Buck) - Black Bengal Crosses - Open Grazing

Sl. No.	Particulars	Cost (₹)
1	Cost of 10 does (Adult 1year old) (4500/does)	45000
2	Cost of 1 buck (Adult 1year old)	5000
3	Insurance @ 8% per year	4000
4	Medicines and de worming @ ₹200 per animal	2200
5	Miscellaneous Expenses	1120
6	<b>Total</b>	<b>57320</b>
	<b>Rounded off to</b>	<b>57,000</b>

**2. Goat rearing (20 does + 1 Buck) - Black Bengal Crosses - Open Grazing**

Sl. No.	Particulars	Cost (₹)
1	Cost of 20 does ( Adult 1year old) (4500/does)	90000
2	Cost of 1 buck ( Adult 1year old)	5000
3	Insurance @ 8% per year	7600
4	Medicines and de worming @ ₹200 per animal	4200
5	Miscellaneous Expenses	3500
6	<b>Total</b>	<b>110300</b>
	<b>Rounded off to</b>	<b>110000</b>

**3. Goat rearing (10 does + 1 Buck)-Black Bengal Crosses - Stall Feeding**

Sl. No.	Particulars	Cost (₹)
1	Cost of 10 does ( Adult 1year old) (4500/does)	45000
2	Cost of 1 buck ( Adult 1year old)	5000
3	Bamboo Made Raised Platform (20 feet Lx 2 feet W x 1 foot H)	11900
4	Insurance @ 8% per year	4000
5	Feed cost for 6 months (@ 300g per animal @ ₹ 20 per kg)	13068
6	Medicines and de worming (@200/animal)	2200
	<b>Total</b>	<b>81168</b>
	<b>Rounded off to</b>	<b>81000</b>

**4. Goat rearing (20 does + 1 Buck) - Black Bengal Crosses - Stall Feeding in Bamboo Houses**

Sl. No.	Particulars	Cost (₹)
1	Cost of 20 does ( Adult 1year old) (4500/does)	90,000
2	Cost of 1 buck ( Adult 1year old)	5,000
3	Bamboo Made House (15 feet Lx 10 feet W x 8 feet H)	40,000
4	Insurance @ 8% per year	7,600
5	Feed cost for 6 months (@ 300g per animal @ ₹ 22 per kg)	24,948
6	Medicines and de worming @ ₹200 per animal	4,200
	<b>Total</b>	<b>1,71,748</b>
	<b>Rounded off to</b>	<b>1,72,000</b>





# Poultry Farming

## H. POULTRY FARMING

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months)
1	Commercial broiler unit	1000 birds (All in all out deep litter system)	594000	5	6 months to 1 year
2	Commercial Broiler unit	500 birds (All in All out deep litter system)	308000	5	6 months to 1 year
3	Commercial Broiler unit	250 birds (All in All out deep litter system)	152000	5	6 months to 1 year
4	Commercial Layer Unit	1000 birds(Cage system 1+1+3)	642000	5	6 months to 1 year
5	Commercial Layer Unit	2000 birds(Cage system 1+1+3)	1284000	5	6 months to 1 year
6	Commercial Layer Unit	5000 birds(Cage system 1+1+3)	3290000	5	6 months to 1 year
7	Duck Rearing Unit	100F + 15 M (Semi Intensive System )	105000	5	6 months to 1 year
8	Home Lighting cum Poultry	5w Led Bulb *6 pcs for 1000 Birds 7w Led Bulb *6 pcs for 1000 birds	35000 30000	5	6 months to 1 year

### Terms & Conditions

1. The new poultry farms may be one km away from the existing farms/ complexes.
2. The Bank should ensure that firm arrangements are made by beneficiaries for getting regular supply of quality chicks as per schedule from a reputed hatchery, duly protected with prophylactic vaccinations. The beneficiary should enter into tie-up arrangements with the hatcheries in this regard wherever possible for continuity of supply.
3. The bank shall ensure that periodical health check-up of poultry flock by a competent veterinarian, preferably at least once a month, is carried out.
4. A regular vaccination schedule as prescribed by the vet, should be followed immediately after purchase of the chicks.
5. Periodical de-beaking and de-worming of birds should be done.
6. Utmost cleanliness and hygienic conditions should be maintained in the poultry sheds, farm and in the management of the poultry flock. The houses should be properly disinfected / sprayed with insecticide sprays before housing the new flock.
7. Fresh, clean and dry litter material should be placed on the floor of poultry house in case of deep litter system before the new flock is introduced in the shed.
8. Bank may ensure that a proper marketing arrangement has been made for the marketing of the eggs in case of layer units

**Detailed Cost Breakup:****1. Commercial Broiler unit - 500 birds (All in all out deep litter system)**

Sl. No.	Particulars	Amount (₹)
1	Civil Structures - Shed Construction 600 Sq. Ft. @ ₹ 319/Sq. Ft.	191400
2	Broiler Equipment @ ₹ 45/Bird	22500
3	Electrical installations @ 3% of Civil Cost	5742
4	Birds (525 chicks, 5% mortality rate ₹ 35 per bird)	18375
5	Insurance @ 6% of Bird Cost	1102
6	<b>Feed Cost @ ₹ 30/Kg</b>	<b>52500</b>
7	<b>Misc. Expenses (Vaccine, Medicine Etc.) @ ₹ 32/bird</b>	<b>16000</b>
8	<b>Total Cost (₹)</b>	<b>307619</b>
	<b>Rounded off to (₹)</b>	<b>308000</b>

**2. Commercial Layer unit - 5000 birds (Cage System 1+1+3)**

Sl. No.	Particulars	Amount (₹)
1	Civil Structure @ 1 Sq. Ft./bird. ₹ 275/Sq. ft.	137,000
2	Feed Store (100 Sq. Ft. )	27500
3	Fencing	12000
4	Electrical installations @ 3% of civil costs	41250
5	MI structures (borewell/tank/pipes)	90000
6	Cage & Layer Equipment @ ₹ 170/bird	850000
7	Birds (5250 chicks, 5% mortality rate ₹ 35 per bird)	183750
8	Feed Cost @ ₹ 30/Kg (3.2 Kg/bird)	560000
9	Insurance @ 6%	11025
10	Misc. Expenses (Vaccine, Medicine Etc.) @ ₹ 25/bird	125000
11	Labour Cost @ ₹ 12,000/month till First Bath (1.5 months)	15000
12	<b>Total Cost (₹)</b>	<b>3290525</b>
	<b>Rounded off to (₹)</b>	<b>32,90,000</b>

**3. Home Lighting Cum Poultry – 1000 birds (5 Watt led bulb, 6 Pieces for 4 Hours)**

Sl. No.	Particulars	Amount (₹)
1	Solar panel with mounting frame- 1 (50w)	2500
2	Battery – (60AH)	8000
3	Battery charger	2000
4	LED bulbs (6)	500
5	Wiring	2000
	<b>Total (₹)</b>	<b>15000</b>

We may require 8 hours or more of lighting in winter. So, the system will cost around ₹ 30,000.







# Fisheries

## I. FISHERIES

Sr. No.	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months)
1	Pond Development (one acre)	1 Acre* 6ft excavation	508000	7	1 year
2	Renovation of Pond (one hectare)	1 acre * 5 ft.	300000	7	1 year
3	Gill Net	20Kg nylon net with 80-100 mm mesh	12000	3	Nil
4	Drag Net	500' *20' nylon net	55000	3	Nil
5	Seed Production in Seasonal Ponds	0.2 ha	26000	3	6 months
6	Fingerling Production in Rearing pond	0.2 ha	45000	3	6 months
7	Pangasiussutchi catfish Farming	1-acre fish farm with 2000 kg annual production	113800	2	1 year
8	Scientific Intensive Pangasiussutchi catfish Farming	1-acre fish farm with 8000 kg annual production	616000	2	1 year
9	Cage Farming of fish in Freshwater	Construction/ Installation Size- 4 X (6mX4mX4m), Inputs for 4 Cages	300000	3-5	6 months-1 Year
10	Cage Farming of fish in Freshwater (Pangasiussutchi)	Construction/ Installation Size- 2 X (8mX6mX5m), Inputs for 2 Cages	770000	3-5	6 months-1 year
11	Cage Farming of fish in Freshwater (Pangasiussutchi )	Construction/ Installation Size- 2 X (6mX6mX5m), Inputs for 2 Cages	770000	3-5	6 months-1 year
12	Fish Seed hatchery	Construction / Fabrication and Operation	2750000	5-7	1 year
13	Re-Circulatory Aquaculture System (Pangasiussutchi/ GIFT)	90 Cub.M Capacity of water (8 Tank)	5000000	5-7	6 months-1 Year
14	Re-Circulatory Aquaculture System (Pangasiussutchi/GIFT)	100 Cub.M. Capacity of water (One Tank)	750000	5-7	6 months-1 year
15	Re-Circulatory Aquaculture System (Pangasiussutchi/GIFT)	90 Cub.M. Capacity of water (4 Tank)	2500000	5-7	6 months-1 year
16	Biofloc - 50 Tanks Installation & Culture	(4m dim. & 1.5 m height) Large	5000000	5-7	6 months-1 year
17	Biofloc - 25 Tanks Installation & Culture	(4m dim. & 1.5 m height)	2500000	5-7	6 months-1 year
18	Biofloc - 7 Tanks Installation & Culture	(4m dim. & 1.5 m height)	750000	5-7	6 months-1 year

Sr. No.	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months)
19	Pearl culture	1 Acre	400000	5-7	1 year
20	Fish cum Poultry Farming	0.4 ha	357000	5	
21	Fish cum Duck Farming	0.4 ha	153350	5	
22	Fish cum Pig Farming	0.4 ha	250000	5	
23	Inputs for freshwater Aquaculture including fish culture, scampi, pangasius, tilapia etc.	01 ha water area	400000		
24	Backyard Ornamental Fish Seed rearing unit (Freshwater fish)	Cement tanks-17000 ltrs	300000		
25	Medium Scale Ornamental fish Rearing Unit (Freshwater Fish)	Cement tanks-50000 ltrs	800000		
26	Integrated Ornamental fish unit (breeding and rearing for freshwater fish)	Cement tanks-1,10,000 ltrs	2500000		
27	Mini Fish Feed Mill	2 tons/day production capacity	3000000		
28	Three Wheelers with ice box	01(number)	300000		
29	Live fish vending centre	01(number)	2000000		
30	Construction of fish kiosks including kiosks of aquarium/ornamental fish	01 (number)	1000000		
31	Boat (replacement) and net for traditional fishermen (nos.)	01 (number)	550000		

\* Note: Unit Costs are decided as per National Fisheries Development Board (NFDB) published PMMSY Guidelines

#### Terms & Conditions:

1. The financing bank should ensure that the loanee farmer has adequate training (especially in activities like RCAS or Cage Fisheries).
2. For Working Capital needs, farmers should avail KCC loans through their Fisheries KCC Card. Banks should ensure all the beneficiary farmers are enrolled under Fisheries KCC Scheme.
3. Development of new water structure should be financed by banks only when absolutely necessary. The farmers should be encouraged to renovate existing water structure for fish farming.
4. The banks should ensure procurement of good fingerlings/seeds from reputed hatcheries/sources. Guidance in this regard may be sought from Department of Fisheries, Govt. of Jharkhand.
5. The banks should ensure that, at the time of harvest, arrangement for marketing, processing and preserving fish are properly made.

**Detailed Cost Breakup:****1. Scientific Intensive Pangassius sutchi Catfish Farming (1 Acre Fish Farm, 8000 Kgs) in Existing Pond**

<b>A) Capital Cost</b>		
<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount (₹)</b>
1	Site clearance and Pond Renovation	15000
2	Diesel Pump Set (Solar+ Electricity) - 5 HP	33000
3	Inlet/outlet sluices	7700
4	Nets and other implements	11000
5	Miscellaneous	2000
<b>Total (A) (₹)</b>		<b>68700</b>
<b>B) Operational cost for one crop</b>		
1	Drying, desilting and ploughing	2200
2	Lime - 2000 Kgs	11000
3	Pangassius Fish Seed - 8000 Seeds, 4 ₹/Seed	32000
4	Fish Feed (FCR 2:1) Oil cake & Rice bran - 13800 Kgs @ ₹ 25/Kg	345000
5	Pumping charges ( electricity /diesel) @ 4000/month	48000
6	Watch and ward @ ₹ 5000/month	66000
7	Probiotics & Minerals	25500
8	Miscellaneous including harvesting charges - ₹ 2/Seed	17600
<b>Total (B) (₹)</b>		<b>547300</b>
<b>Total Cost ( A +B) (₹)</b>		<b>616000</b>

**2. Cage Farming of Fish in Freshwater Battery of 4 cages (each cage of 6m x 4m x 4m l x b x h – Vol.- 4 x 96 CuM)**

<b>Sr. No.</b>	<b>Particulars</b>	<b>Amount (₹)</b>
<b>A</b>	<b>Capital Cost</b>	
1	GI Cage including construction of 6m x 4m x 4m G.I. Cages, Floating Material sand Other Accessories	125000
	<b>Total Cost(A)</b>	<b>125000</b>
<b>B</b>	<b>Recurring cost for one crop</b>	
1	Fingerlings-Pangasius/Monosex Tilapia/other suitable species) (Total 24000nos.@ 6000 seeds in each cage/ 1.50₹/fingerling)	36000
2	Formulated Floating Feed (3000Kg,@40₹/Kg) (size 1 mm to 4mm)	120000
3	Medicine Cost	11000
4	Miscellaneous Cost	8000
	<b>Total Cost(B) (₹)</b>	<b>175000</b>
	<b>Total Unit Cost (A) + (B) (₹)</b>	<b>300000</b>



### 3. Establishment of New Freshwater Finfish Hatchery (Capacity- 60 Million Carp Spawn)

Sr. No.	Particulars	Amount (₹)
<b>A</b>	<b>Capital Cost-</b>	
1	Construction of 6m dia one no. breeding pool.	115000.00
2	Construction of 3m dia 3 nos. hatching pool.	137500.00
3	Construction of overhead RCC tank 22'-0" X 10'-0" X 8'-0" (50000 Ltr) (Excluding pipe fittings.)	750000.00
4	Construction of Cemented Cistern (a) 5 nos. 12'-0" X 6'-0" X 2'-6"	305000.00
6	Construction of 6"x4" dia deep boring, with pump set	176000.00
7	Construction of 1no. Egg collection cum spawn collection chamber. (4'-0"X6'-0"x4'-0")	19000.00
8	Construction of One no. Brooder tanks (W/A- 0.50 acres ), 4nos. Nursery tanks ( W/A- 4 X 0.25=1.00 acres)	460000.00
9	Cost of Pipe fittings in breeding pool, hatching pool and overhead tanks with all required fittings i.e required valves, tees, elbows, nipples, bends etc. as required	130000.00
10	Cost of electrification and Gen set/ pump set as required.	66000.00
12	Cost of Brooders -1400 Kg. @250/- per Kg.	350000.00
13	Contingent and miscellaneous expenses etc.	27000.00
	<b>Total (₹)</b>	<b>2535500.00</b>
<b>B</b>	<b>Recurring Cost (Input Cost) one cycle</b>	<b>214500.00</b>
	<b>Total Cost (₹)</b>	<b>27,50,000.00</b>

### 4. Establishment of Small RAS (with 1 Tank of 100 CuM /tank capacity)

Sr. No.	Particulars	Amount (₹)
<b>A</b>	<b>Capital Cost</b>	
1	Fish Tank Construction	165000
2	Procurement & installation of pumps, filters, aerators, pipes, valves, etc.	495000
	<b>Sub-Total (A)</b>	<b>660000</b>
<b>B</b>	<b>Input Cost</b>	
1	Seed (4500 fingerlings @ ₹4/each)	20000
2	Feed (28-30% protein; floating pellets)	82000
4	Probiotics	5500
5	Electricity	44000
6	Miscellaneous	11000
	<b>Sub-Total (B) (₹)</b>	<b>150000</b>
	<b>Total Cost (A+B) (₹)</b>	<b>750000</b>

**5. Establishment of Small RAS (with 1 Tank of 100 CuM /tank capacity)**

Sr. No.	Component	No.	Per Unit Cost (₹)	Amount (₹)
<b>Capital cost</b>				
1	Setup of Tarpaulin/Fibre tanks(15,000 Litres capacity)	50	27500	1375000
2	Shed material and accessories fixing charges	1600 m2	720/m2	1152000
3	Water supply bore well and pump (2 nos. of 3 HP)	-	165000	165000
4	PVC pipe fittings for air, water flow	LS	495000	495000
5	Nets and accessories	50	3300/tank	165000
6	Blower (1 HP), Air stones and other accessories	8	33000	264000
7	Electrification	LS	165000	165000
8	Power generator(5 KVA)	1	165000	165000
9	Miscellaneous expenses			55000
<b>Sub Total (₹)</b>				<b>3550000</b>
<b>Input cost for one crop</b>				
10	Seed @₹4/- for 50000	220000		
11	Feed cost @ ₹30/kg for 24 T	792000		
12	Probiotics, carbon source, test kits, electricity etc.	55000		
<b>Subtotal (₹)</b>				<b>1450000</b>
<b>Total Cost (₹)</b>				<b>5000000</b>

**6. Establishment of large RAS (with 8 tanks of minimum 90 m<sup>3</sup> /tank capacity 40 ton/ crop/ Biofloc (50 tanks of 4m dia and 1.5 high) culture system**

S.No.	Title	Description
1	Suitable Cultural Species	Tilapia
2	Each tank size	6.7mX 6.7mX 2m
3	Total volume	90m <sup>3</sup>
4	Stocking size	Fingerling
5	Stocking density/tank	6000
7	Survival rate	90%
8	FCR	1:1.3
9	Culture period/crop duration	6 months
10	Cost of Seed	₹4/pc
11	Cost of feed	₹30/kg
12	Total feed required	28 MT
13	Size at the time of Harvest	500g
14	Expected total Biomass	21.6 MT
15	Sale price	₹140/kg

S.No.	Particulars	Total amount
<b>A. Capital Cost</b>		
1	Construction of tank including the pump, aerator, biofilter, Net, Water Quality testing kits and accessories @₹4.5 lakh/unit	3960000
<b>B. Input Cost</b>		
1	Seed cost @ ₹4/pc for 48000	210000
2	Feed cost	880000
3	Electricity charges	330000
4	Manpower	106000
5	Miscellaneous	15400
<b>Sub total (₹)</b>		<b>1400000</b>
<b>Total (₹)</b>		<b>5000000</b>

### 7. Establishment of Small RAS (with 1 tanks of 100 m<sup>3</sup> /tank capacity /Biofloc 7 tanks of 4m dia and 1.5 high) culture system

S.No.	Title	Description
1	Suitable Cultural Species	GIFT (Oreochromis niloticus), Pearlspot (Etroplus suratensis) and Pangasius (Pangasius and on hypophthalmus)
2	Each tank size	6.7mX 6.7mX 2m
3	Total volume	100m <sup>3</sup>
4	Stocking size	Fingerling
5	Stocking density/tank	6000
7	Survival rate	90%
8	FCR	1:1.3
9	Culture period/crop duration	6 months
10	Cost of Seed	₹4/pc
11	Cost of feed	₹30/kg
12	Total feed required	3.51 MT
13	Size at the time of Harvest	500g
14	Expected total Biomass	2.7 MT
15	Sale price	₹140/kg

Sl. No.	Components	Amount (in ₹)
<b>A</b>	<b>Capital Cost</b>	
1	Fish Tank Construction	165000
2	Procurement & installation of pumps, filters, aerators, pipes, valves, etc.	495000
	Sub-Total (A)	600000
<b>B</b>	<b>Input Cost</b>	
1	Seed (4500 fingerlings @ ₹4/each)	20000
2	Feed (28-30% protein; floating pellets)	82000
4	Probiotics	5500
5	Electricity	44000
6	Miscellaneous	11000
	<b>Sub-Total (B) (₹)</b>	<b>150000</b>
	<b>Total Cost (A+B) (₹)</b>	<b>750000</b>



## 8. Establishment of Medium RAS (with 4 tanks of minimum 90 m<sup>3</sup> /tank capacity 10 ton / crop/ Biofloc (25 tanks of 4m dia and 1.5 high) culture system

S.No.	Title	Description
1	Species Suitable for culture	GIFT (Oreochromis niloticus), Pearlspot (Etroplus suratensis) and Pangasius (Pangasianodon hypophthalmus)
2	Each tank size	6.7mX 6.7mX 2m
3	Total volume	90 m <sup>3</sup>
4	Stocking size	Fingerling
5	Stocking density/tank	6000
7	Survival rate	90%
8	FCR	1:1.3
9	Culture period/crop duration	6 months
10	Cost of Seed	₹4/pc
11	Cost of feed	₹30/kg
12	Total feed required	14 MT
13	Size at the time of Harvest	500g
14	Expected total Biomass	10.8 MT
15	Sale price	₹140/kg

Sl. No.	Components	Amount (in ₹)
<b>A. Capital Cost</b>		
1	Construction of tank including the pump, aerator, biofilter, Net, Water quality testing kits and accessories @₹4.5 lakh/unit	2000000
<b>B. Input Cost</b>		
1	Seed cost @ ₹4/pc for 24000	105000
2	Feed cost	440000
3	Electricity charges	165000
4	Manpower	53000
5	Miscellaneous	7700
	Subtotal (₹)	770000
<b>Total (₹)</b>		<b>2500000</b>

## 9. Biofloc Unit – 25 Tanks

Sr. No	Component	Details
1	Area for 25 tanks	710 m <sup>2</sup>
2	Biofloc Tank size	4 metre diameter and 1.5 meter height
3	Water holding capacity of each tank	15,000 Litres capacity
4	Water quality parameters	Dissolved oxygen-5mg/l, Temperature-26-34 degrees, PH-7.5 to 8, TDS-600ppm, Floc density-25-40 mg/l, Ammonia-0.5 ppm, Nitrite-0.3 ppm, Nitrate-150 ppm, Alkalinity-120-280 ppm
5	Tanks Made-up of	Tarpaulin/Fibre/HDPE
6	Stocking density	100 nos/m <sup>3</sup> (1000 nos per 15,000 litres tank -depending on species )
7	Name of fish species suitable	Tilapia ,Common carp, Pangasiusetc
8	Survival (%)	80
9	Type of feed to be used	floating pellet feed
10	% of feed	2-3% per Average Body weight
11	Feeding frequency	4 times early stage, later 2 times per day
12	FCR	1:1.2
13	Duration of culture	6 months
14	Size/weight of the species(gm)	500 gm average weight
15	No.of crops per year	2
16	Production	10 Tonnes per crop
17	Feed requirement	12 T
18	Farm gate price(Rs)	130/- kg fish

### Cost Estimates of Biofloc Unit:

S. No	Component	Nos	Cost (₹)	Total (In ₹)
<b>Capital cost</b>				
1	Setup of Tarpaulin/Fibre tanks(15,000 Litres capacity)	25	27500	687500
2	Shed material and accessories fixing charges	800 m <sup>2</sup>	660/ m <sup>2</sup>	580800
3	Water supply bore well and pump (2 nos. of 3 HP)	1	165000	165000
4	PVC pipe fittings for air, water flow	LS	275000	275000
5	Nets and accessories	25	3300/tank	82500
6	Blower (1HP), Air stones and other accessories	4	33000	132000
7	Electrification	LS	110000	110000
8	Power generator(5 KVA)	1	165000	165000
9	Miscellaneous expenses			55000
<b>Sub Total (₹)</b>				<b>2000000</b>
<b>*Input cost for one crop</b>				
11	Seed cost @ ₹4 for 25000	110000		
12	Feed cost @ ₹ 30/kg for 12 T	396000		
13	Test kit, carbon source, electricity charges etc.	44000		
<b>Sub Total (₹)</b>				<b>500000</b>
<b>Grand Total (₹)</b>				<b>2500000</b>

\*input cost may vary depending on stocking density

S. No	Component	Details
1	Area for 7 tanks	200 m2
2	Biofloc Tank size	4 metre diameter and 1.5 meter height
3	Water holding capacity of each tank	15,000 Litres capacity
4	Water quality parameters	Dissolved oxygen-5mg/l, Temperature-26-34 degrees, PH-7.5 to 8, TDS-600ppm, Floc density-25-40 mg/l, Ammonia-0.5 ppm, Nitrite-0.3 ppm, Nitrate-150 ppm, Alkalinity-120-280 ppm
5	Tanks Made-up of	Tarpaulin/Fibre/HDPE
6	Stocking density	100 nos/m3 (1000 no.s per 15,000 litres tank -depending on species)
7	Name of fish species suitable	Tilapia ,Common carp, Pangasius etc
8	Survival (%)	80
9	Type of feed to be used	floating pellet feed
10	% of feed	2-3% per Average Body weight
11	Feeding frequency	4 times early stage, later 2 times per day
12	FCR	1:1.2
13	Duration of culture	6 months
14	Size/weight of the species(gm)	500 gm average weight
15	No.of crops per year	2
16	Production	4.2 Tonnes per crop (600kg per tank per crop)
17	Farm gate price(Rs)	130/- kg fish
18	Capital cost	6.00 Lakhs
19	Input cost	1.5 lakhs per one crop
20	Total project cost	7.5 lakh

## 10. Biofloc Unit – 7 Tanks

S.No	Component	Nos	Cost (₹)	Total (Amt In ₹)
<b>Capital Cost</b>				
1	Setup of Tarpaulin/Fibre tanks(15,000 Litres capacity)	7	27500	192500
2	Shed material and accessories fixing charges	200 m2	660/ m2	132000
3	Water supply bore well (3HP)	1	110000	110000
4	PVC pipe fittings for air, water flow	LS	82000	82000
5	Nets and accessories	LS	16500	16500
6	Blower (1 HP), Air stones and other accessories	1	33000	33000
7	Electrification	LS	11000	11000
8	Power generator(2 KVA)	1	49500	49500
9	Weighing balance	1	11000	11000
10	Miscellaneous expenses	LS	22000	22000
<b>Total</b>				<b>600000</b>
*Input cost for one crop				
11	Seed cost, Feed cost, Probiotics, Test kits etc.	165000		
<b>Total cost per one crop (₹)</b>				<b>150000</b>
<b>Grand Total (₹)</b>				<b>750000</b>

\*input cost may vary depending on stocking density



**11. ECONOMICS OF FISH CUM DUCK FARMING (Unit area 0.4 ha.)**

S.No.	Items	Quantity	Rate (In ₹)	Amount (In ₹)
<b>A</b>	<b>Expenditure</b>			
1	Cost of fish fingerlings	5000 nos.)	₹ 750/ Thousand	3750
2	Cost of Ducklings 1/415 1/4iUng1/2 fnukasdk cRr[k ptk1/2	160 (nos.)	₹ 100/ each	16000
3	Feed for Ducklings	4080 Kg.	₹ 20/Kg	81600
4	2mm fish feed for fish fingerlings	400 Kg.	₹50/Kg	20000
5	Medicines and Misc. for Ducklings			5000
6	Lime	200 Kg.	₹ 10/Kg	2000
7	Duck house	1		25000
<b>Total Expenditure (₹)</b>				<b>153350</b>
<b>B</b>	<b>Income</b>			
1	Fish	2400 Kg.	₹ 140/Kg	336000
2	Duck meat	225 Kg.	₹ 150/Kg	33750
3	Duck egg	12000 (nos.)	₹ 10/each	120000
<b>Total Income (₹)</b>				<b>489750</b>
<b>Profit (B-A) (₹)</b>				<b>336400</b>

\* Based upon the Integrated Fish Farming Economics provided by Associate Dean College of Fisheries Science, Gumla vide letter no. 160/COFS dated 11.12.2020

**12. Inputs for freshwater Aquaculture including composite fish culture, scampi, pangasius, tilapia etc. (1 hectare)**

Sl. No	Particulars	Total Amount (In ₹)
1	Pond preparation, Liming, zeolite etc. (L.S.)	30000
2	Seed cost @ ₹3/pc for 5000 nos.	15000
3	Feed cost @ ₹30/kg for 6.37 MT	190000
4	Manpower-1 no. @ ₹8500 p.m. for 10 months	85000
5	Electricity and fuel L.S.	40000
6	Harvesting charges	20000
7	Miscellaneous	20000
	<b>Total</b>	<b>400000</b>

**Model Cost estimate for the selected schemes under PMMSY**

Sl.No	Particulars	Total Amount (In ₹)
1	Pond Preparation, Liming, Zeolite,etc	30000
2	Seed cost @ ₹3/pc for 5000 nos.	15000
3	Feed Cost @ ₹30/kg for 6.37 MT	190000
4	Manpower 1 no. @ ₹8500 p.m. for 10 months	85000
5	Electricity and fuel L.S	40000
6	Harvesting charges	20000
7	Miscellaneous	20000
	<b>Total</b>	<b>400000</b>

## Development of ornamental and recreational fisheries

### 1. Backyard Ornamental Fish seed rearing unit (Freshwater fish)

Sl.No.	Item (A)	Specification	As suggested by NFDB (₹)	Jharkhand Context (₹)
1	Cement tanks(17000 ltrs) @ ₹4.5/ltr	A.For rearing of fry (500 ltr X 6 no.) B. For rearing of fingerling to marketable size(1000 ltr X 10 no.) C. Water storage tank(2000 ltr X 2)	75000	75000
2	Shed	100 Sq.ft	90000	90000
3	Live feed facility and feed maker	Cement Tanks/FRP tanks, Glass tanks for stock culture	25000	25000
4	Glass tanks	Aquarium tanks including stand	10000	10000
5	Water supply system	Water line pipes, Motor & Pumps, hose & fitting	20000	20000
6	Electrification	Wiring material, lightings and fixtures.	5000	5000
7	Water treatment equipment	Biological filters, carbon filters etc.	10000	10000
8	Aeration/lifesaving	Oxygen cylinder, Aerator, compressor / Air blower, shade nets, Netting for each tanks, Hand nets, packing Machine, etc.	15000	15000
<b>Total Capital Cost</b>			<b>250000</b>	<b>250000</b>

Sl.No	Item(B)	Quantum	As suggested by NFDB (₹)	Jharkhand Context (₹)
1	Including procurement of seed, feed, maintenance, miscellaneous etc.	LS	50000	50000
<b>Total Cost (A+B) (₹)</b>			<b>300000</b>	<b>300000</b>

### 2. Medium Scale Ornamental fish Rearing Unit (Freshwater Fish)

Sl.No.	Item(A)	Specification	As suggested by NFDB (₹)	Jharkhand Context (₹)
1	Cement tanks(50000 ltrs) @ ₹4.5/ltr	A. For rearing of fry (500 ltr X 20 no.) B. For rearing of fingerling to marketable size (2000 ltr X 15 no.) C. Water storage tank(10000 ltr)	225000	225000
2	Shed	250 Sq.ft	250000	200000
3	Live feed facility and feed maker	Cement Tanks/FRP tanks, Glass tanks for stock culture	50000	60000
4	Glass tanks	Aquarium tanks including stand	30000	60000
5	Water supply system	Water line pipes, Motor & Pumps, hose & fitting	40000	50000
6	Electrification	Wiring material, lightings and fixtures.	30000	30000
7	Water treatment equipment	Biological filters, carbon filters etc.	50000	50000
8	Aeration/lifesaving system	Oxygen cylinder, Aerator, compressor/Air blower, shade nets, Netting for each tanks, Hand nets, packing Machine, etc.	25000	25000
<b>Sub-Total</b>			<b>700000</b>	<b>700000</b>

Sl.No	Item(B)	Quantum	As suggested by NFDB (₹)	Jharkhand Context (₹)
1	Including procurement of seed, feed, maintenance, miscellaneous etc.	LS	100000	100000
<b>Total Cost (A+B) (₹)</b>			<b>800000</b>	<b>800000</b>

### 3. Integrated Ornamental fish unit (breeding and rearing for freshwater fish)

Sl.No.	Item(A)	Specification	As suggested by NFDB (₹)	Jharkhand Context (₹)
1	Cement tanks(1,10,000 ltrs) @ ₹4.5/ltr	A.Overhead tank 5000 ltr B.Water storage tank 10,000 ltr C.Brood stock holding tank (2000 ltr X 15 no.) D.Spawing or breeding tank (500 ltr 20 no.) E. Spawn to fry rearing tank (500 ltr X 30 no.) F. Fry to fingerling/marketable size rearing tank (1000 ltr X 40)	500000	500000
2	Shed (Poly house type/Dura shine shed)	250 Sq.ft	400000	450000
3	Live feed facility and feed maker	Cement Tanks/FRP tanks, Glass tanks for stock culture	250000	200000
4	Glass tanks	Aquarium tanks including stand	100000	100000
5	Water supply system	Water line pipes, Motor & Pumps, hose & fitting	200000	200000
6	Electrification	Wiring material, lightings and fixtures.	150000	150000
7	Water treatment equipment	Biological filters, carbon filters etc.	100000	100000
8	Aeration/lifesaving system	Oxygen cylinder, Aerator, compressor/Air blower, shade nets, Netting for each tanks, Hand nets, packing Machine, etc.	200000	200000
9	Aquarium fabrication unit	For purchase of Machinery & Equipment	200000	200000
10	Miscellaneous		100000	100000
<b>Total capital Cost</b>			<b>2200000</b>	<b>2200000</b>

Sl.No	Item(B)	Quantum	As suggested by NFDB (₹)	Jharkhand Context (₹)
1	Including procurement of seed, feed, maintenance, miscellaneous etc.	LS	300000	300000
<b>Total Cost (A+B)</b>			<b>2500000</b>	<b>2500000</b>

### 4. Fish Feed Mills

Mini Mills of Production Capacity of 2 tons/day- unit Cost- 30.00 lakhs

Sl. No.	Particulars	Total amount (In ₹)
1	Premises for housing feed mill (Industrial Type of shed)	1000000
2	Hammer Mill	
3	Micro Pulveriser	
4	Mixer (Homogenizer)	
5	Steam Boiler	
6	Floating pellet Section a. Sieve Assemble b. Ring-die Pellet Mill c. Dryer-Cooler d. Pellet Crumble e. Ancillaries	1200000
7	Conveyor System	
8	Installation Charges	
9	Power Requirements and Generator Set	600000
10	Water Treatment and supply units	200000
Total		3000000







# Land Development

## J. LAND DEVELOPMENT

	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months)
1	Dry land farming	per hectare	26000	8	12 months
2	Reclamation of acidic land	per acre/per crop/per year	60000	7-9	24 months
3	Land levelling (per hectare)	Up to 3% slope	65000	8	24 months
4	Tati Terrace/ Retention Terrace/ Contour Bunding	Slope 3 Spacing between contour 66.6'	15000	9-12	Nil
5	Bench Terracing (per hectare)	Slope up to 3%	66000	3-5	Nil
6	Water Harvesting Tank	30x30x3 size	200000	3-5	12 months
7	Farm pond	10x10x3 m size	20000	4-5	6 months

### Detailed Cost Breakup:-

#### 1. Dry land farming (Taking pulses as model –Arhar)

Sr. No	Item	Cost (₹/ha)
1	Land preparation	12000
2	Seed & Seed treatment	4000
3	Manure and fertilizer	4000
4	Weed removal & plant protection	2000
5	Harvesting	4000
	<b>Total</b>	<b>26000</b>

#### 2. Reclamation of acidic soil

Sr. No	Item	Cost (₹/ha)
1	Lime @ 5t/ha @₹ 500 per 50kg bag	50000
2	Application cost (@20% of above)	10000
	<b>Total</b>	<b>60000</b>

#### 3. Land Levelling

Sr. No	Item	Cost (₹/ha)
1	Considering 40 hrs of operation	1500/hr (For Rent)
2	Machine rent	₹ 60000/ha
3	Labour	₹ 5000/ha
	<b>Total</b>	<b>65000/ha</b>

Note: Levelling may take 2 days (12hrs) to 10 days (60 hrs) of operation by machines (40 -80 HP)

#### 4. Contour Bunding / Tati Terrace/ Retention Terrace

Sr. No	Item	Cost (₹/ha)
1	Running length of bunding per ha	333 /m
2	Cost per m	45/ m
	<b>Total Cost</b>	<b>₹ 15000</b>
Base width – 2m, height – 0.6m, CS Area- 0.66 sqm		

#### 5. Bench terracing

Sr. No	Item	Cost (₹/ha)
1	Length of terrace	1000/ha
2	Earthwork required	2000-2200 m <sup>3</sup> /ha
3	Earthwork required –Average machine output	50 m <sup>3</sup> /ha
4	Machine rent	1500 / hr
	<b>Total Cost (2200*(1500/50))</b>	<b>66000</b>

- It is generally suitable for 20-30% slope land
- Terracing for decreasing the slope upto 3%

#### 6. Water Harvesting Tank (30m\*30m\*3m)

##### a. By Machine

Sr. No	Item	Cost (₹/ha)
1	Excavation by JCB (@ 30m <sup>3</sup> /hr & cost ₹ 1500/hr)	120000
2	Loading and unloading of soil (half of the excavated soil @ ₹30/m <sup>3</sup> )	36000
3	Compaction and dressing (10% of excavation)	12000
4	Inlet and outlet	25000
5	Miscellaneous	7000
	<b>Total Cost</b>	<b>200000</b>

Total excavation (m<sup>3</sup>)– 2400 (may range from 1900 to 2500 as per slope design)

##### b. By Manual Labour

Sr. No	Item	Cost (₹/ha)
1	Excavation cost (average 120/m <sup>3</sup> for 3 layers) = 2400*120	288000
2	Compaction cost (10%of above)	28800
3	Inlet and outlet	32000
	<b>Total Cost</b>	<b>348000</b>
	<b>Rounded Off to</b>	<b>350000</b>
Total excavation (m <sup>3</sup> )– 2400 (may range from 1900 to 2500 as per slope design)		

## 7. Farm pond (10m\*10m\*3m)

### a. By Machine

Sr. No	Item	Cost (₹/ha)
1	Excavation by JCB (@30m <sup>3</sup> /hr & cost ₹ 1500/hr)	10500
2	Loading and unloading of soil (half of the excavated soil @ ₹30/m <sup>3</sup> )	3150
3	Compaction and dressing (10% of excavation)	1050
4	Inlet and outlet	3000
5	Miscellaneous	2300
	<b>Total</b>	<b>20000</b>
Total excavation (m <sup>3</sup> ) = 210 (may range from 190 to 270 as per slope design)		

### b. By Manual Labour

Sr. No	Item	Cost (₹/ha)
1	Excavation cost (average 120/m <sup>3</sup> for 3 layers) = 210*120	25200
2	Compaction cost (10% of above)	2520
3	Inlet/ Outlet and Miscellaneous	5300
	<b>Total</b>	<b>33020</b>
	<b>Rounded off to</b>	<b>33000</b>
Total excavation (m <sup>3</sup> ) = 210 (may range from 190 to 270 as per slope design)		

Note: For 6 and 7, Cost by machine has been adopted as unit cost as private individual/institutions prefer this due to cost effective and lesser time required

### Terms & Conditions

- The banks should finance land development activities as per the cost norms as indicated in the relevant State/Central Govt. Scheme. Physical norms for land development works (to be decided as per local rates, DSR/SOR of State Govt./Department).
- The banks should ensure that the required technical guidance and supervision is made available by the concerned department of the State Government.
- The cost indicated is for the average slope and loan amount for soil conservation/land development works should be restricted with reference to actual slope of the land.
- The bank should maintain the details regarding the type of land development work(s) proposed along with cost estimates in individual cases financed under the activity.

Banks/Department may enthruse farmers to take up agronomical measures on the engineering structures so as to increase their life.





# Compost Making

## K. COMPOST MAKING

	Particulars	Unit size	Unit Cost	Repayment Period (years)	Gestation Period (Months)
1	NADEP Compost	3m x 2m x 1m	30600	5	Nil
2	Vermi Compost	3m x 2m x 1m	36700	5	Nil

### Detailed Cost Breakup

#### I. COMPOST MAKING BY NADEP PROCESS

##### Technical parameters

Capacity	180 cubic feet (1.8 tonnes)
Size	10' x 6' x 3' (3mX2mX1m)
Thickness of wall	10'

Sl. No.	Particulars	Rate	Quantity	(Amt in ₹) Amount
1	Construction cost			
i	Bricks including transportation cost	9 per brick	1000 bricks	9000
ii	Cement	8 per kg	200 kg	1600
iii	Sand	2000 per cubic meter	3 cubic meter	6000
iv	Mason	700 per day	3 nos.	2100
v	Labour	500 per day	8 man days	4000
vi	Light Thatched roof			
a	Straw, rope		LS (lumpsum)	900
b.	Bamboo	200 per piece	4 nos	800
c.	Labour	500 per day	2 man days	1000
<b>Sub Total</b>				<b>25400</b>
<b>Rounded Off to</b>				
2	Operational Cost			
i	Cow dung	2.5 per kg	150 kg	375
ii	Agro waste	1 per kg	1350 kg	1350
iii	Soil			
a.	Cost of digging (1.5 tones )	257 per day	2 man days	514
b.	Cost of transportation	300 per cart load	2 cart loads	600
vi	Water sprinkling charge once in 4 days	257 per day	3 man days	771
vii	Cost of tank filling	257 per day	2 man days	514
vii	Cost of screening of compost	257 per day	2 man days	514
viii	Miscellaneous	LS	600	
<b>Sub Total</b>				<b>5238</b>
3	Maintenance cost	LS		
<b>Grand Total</b>				<b>30638</b>
<b>Rounded Off to</b>				<b>30600</b>

## II. TINY VERMI COMPOST UNIT

### Technical parameters

Capacity	150 cubic feet ( 1.5 tons)
Size	10' x 6' x 2.5' (3mX2mX1m)
Thickness of wall	10'

	Unit cost :			(In ₹)
1	Construction cost			
i	Brick work in cement	70 per cubic feet	60 cubic feet	4200
ii	Plastering 6 mm	35 per sq ft	160 sq ft	5600
iii	Bottom plain cement concrete	128 per cubic feet	30 cubic feet	3840
Sub Total (A)				13640
2	Light Thatched roof			
i	Straw, rope		LS	900
ii	Bamboo	250 per piece	4 nos	1000
iii	Labour	500 per day	2 man days	1000
3	Vermibed ( broken stone, sand and soil )		LS	1500
4	Soil working implements ( shovel, crowbar, spade, bucket, wire mesh sieve 3 mm and bamboo basket)		LS	2000
5	Cost of earthworms @ ₹500 per Kg		LS	1000
Sub Total(B)				7400
6	Operational Cost ( one cycle lasting 75 to 85 days)			
i	Cow dung	2.5 per kg	2000 kg	5000
ii	Agro waste	1 per kg	2000 kg	2000
iii	Cost of earth Worms@ Rs 500 per Kg		2 Kg	1000
7	Labour cost for sprinkling water, tank filling, etc .	257 per day	20	5140
8	Packing, harvesting and drying etc. including cost of gunny bags			1000
9	Miscellaneous expenses like maintenance of thatched shed, drying of earthworms , etc.			1500
Sub Total (C)				15640
<b>Grand Total</b>				<b>36680</b>
<b>Rounded Off to</b>				<b>36700</b>







# Farm Mechanization

## L. FARM MECHANIZATION

Sr. No.	Particulars	Unit size	Unit Cost (₹)	Repayment Period (years)	Gestation Period (Months)
II	Tractor with accessories and trailer	1 no. 30-35 HP	650000	9-10	6 Months
II	Tractor with accessories and trailer	1 no. 35-40 HP	700000	9-10	6 Months
III	Tractor with accessories and trailer	1 no. 40-45 HP	750000	9-10	6 Months
2	Power Tiller with hatch, straight blade, cage wheel and rotavator				
I	Variant – I	1 no. 11.3 kw-478 Kg	200000	6-7	6 Months
II	Variant - II	1 no. 10.8 kw -476 Kg	160000	6-7	6 Months
III	Variant – III	1 no. 10.1 kw -496 Kg	170000	6-7	6 Months
3	Paddy transplanter with cage wheel	1 no. Self-Propoelled	370000	6-7	6 Months
4	Tools and Implements				
I	Paddy thresher	1 No. Tractor Mounted	150000	4-5	6 Months
II	Multi Crop thresher	1 No. Tractor Mounted	300000	4-5	6 Months
III	Combine Harvester	1 No. Tractor Mounted	150000	4-5	6 Months
IV	Rotavator	1 No. Tractor Mounted	150000	4-5	6 Months
V	Seed cum fertilised drill	1 No. Tractor Mounted	90000	4-5	6 Months
VI	Reaper	1 No. Tractor Mounted	85000	4-5	6 Months
VII	Leveller without spring	1 No. Tractor Mounted	25000	4-5	6 Months
VIII	Leveller with spring	1 No. Tractor Mounted	30000	4-5	6 Months
IX	Zero till seed cum fertiliser drill	1 No. Tractor Mounted	75000	4-5	6 Months
X	Trailer	1 No. 2 Wheel Hydraulic	150000	4-5	6 Months
XI	MB Plough	1 No. Tractor Mounted	20000	4-5	6 Months
XII	Cage Wheel	1 No. Tractor Mounted	10000	4-5	6 Months

### Terms & Conditions:

1. Tractor is defined as vehicle not meant for carry passenger. So, tractor is non transport vehicle. Agricultural tractor is mechanically propelled four wheeler vehicle designed to work with suitable implements for various field operations and/or trailer to transport agricultural material. (Central Motor Vehicle Rule (CMVR), 1989)
2. Tractor may be financed with a minimum three implements including a trailer, unless these implements are already owned at the time of its purchase. The implements should be of good quality preferably of BIS standard and matching with HP of tractor.

3. Tractors shall be registered with the Regional Transport Authority (RTA) concerned and the hypothecation charge of the bank is recorded with the RTA.
4. The bank and/or borrower may satisfy them self with the selection of capacity of tractor/machinery and type of implements, based on estimated operational area of machinery, land holding of barrower, cropping pattern in the area, type of soil, custom hiring etc.
5. Above unit cost are indicative in nature and actual cost depends on make and model. Bank may consider financing based on the quotation/ invoice from dealer/supplier of the reputed farm machinery and manufactures.

Sr. No.	Item of Investment	Unit Size	Specification	Unit Cost (₹)	Repayment Period	Gestation Period (Months)	Remarks
1		Bullock Pair					
I	Bullock Pair	1 pair	Non-Descript Bullock	25000	4-5 Year	6 Months	Half-yearly instalment linked with harvesting and marketing of crops
II	Bullock Pair	1 Pair	Descript Bullock	33000	4-5 Year	6 Months	
2	Bullock with Cart						
I	Bullock with Cart	1 no.	Non-Descript Bullock	46000	4-5 Year	6 Months	
II	Bullock with Cart	1 no.	Descript Bullock	54000	4-5 Year	6 Months	
3	Bullock with Plough					6 Months	
I	Bullock with plough	1 no.	Non-Descript Bullock	27000	4-5 Year	6 Months	
II	Bullock with plough	1 no.	Descript Bullock	35000	4-5 Year	6 Months	





# Solar Home Lighting – CFL Models

## M. SOLAR HOME LIGHTING – CFL MODELS

Model	Photovoltaic Modules/ panels(WP)	Battery Capacity	Maximum recommended load and duty cycle	Unit Cost (₹)	Maximum Repayment period (Years)	Gestation Period (year)
I	10	12v, 7AH(SMF)	5-7 watt load for 3-4 hours(20watt h₹/day)	2700	5	Nil
II	18-20	12v,20AH (Tubular L.M/Gel VRLA)	10 watt load for 4hrs(40watt h₹ per day)	4860-5400	5	Nil
III	37-40	12v, 60AH (Tubular L.M/Gel VRLA)	20 watt load for 4hrs(80watt h₹ per day)	9990-10800	5	Nil
IV	50	12v, 60AH (Tubular L.M/Gel VRLA)	30 watt load for 4 h₹(120 watt h₹ per day)	13500	5	Nil
V	70-80	12v, 80AH (Tubular L.M/Gel VRLA)	80 watt load for 4 h₹(180 watt h₹ per day)	18900-21600	5	Nil
VI	100	12v, 120 AH (Tubular L.M/Gel VRLA)	60 watt load for 4 h₹(240 watt h₹ per day)	27000	5	Nil
VII	125	12v, 150 AH (Tubular L.M/Gel VRLA)	75 watt load for 4 h₹(300 watt h₹ per day)	33750	5	Nil
VIII	150-160	24v, 80 AH (Tubular L.M/Gel VRLA)	90 watt load for 4 h₹(360 watt h₹ per day)	40500-43200	5	Nil
IX	200-210	24v, 120 AH (Tubular L.M/Gel VRLA)	120 watt load for 4 h₹(480 watt h₹ per day)	54000-56700	5	Nil
X	250-300	24v, 150 AH (Tubular L.M/Gel VRLA), 500 VA Inverter	180 watt load for 4 h₹(720 watt h₹ per day)	67400-81000	5	Nil

**N. SOLAR HOME LIGHTING – LED MODELS**

Model	Photovoltaic Modules/panels(WP)	Battery Capacity	Maximum recommended load and duty cycle	Unit Cost (₹)	Maximum Repayment period (Years)	Gestation Period (year)
I	6	12v, 7AH @c/20 (SMF, NiMH or Lithium-ion of Requisite Capacity)	One white LED	2700	5	Nil
II	12	12v, 20AH @c/20 (SMF, NiMH or Lithium-ion of Requisite Capacity)	Two white LED	5400	5	Nil
III	24	12v, 20AH @c/20 (Tubular L.M /Gel VRLA)	Two white LED and one DC Fan of wattage up to 10 Wp	10800	5	Nil
IV	24	12v, 20AH@c/20 (Tubular L.M/Gel VRLA)	Four white LED	10800	5	Nil
V	40	12v, 40AH@c/10 (Tubular L.M/Gel VRLA)	White LED Street Light (Min. of 15 Lux at the height of 4 m & 3 days or 42 hours operating hour autonomy)	18000	5	Nil

**O. GRID CONNECTED SOLAR POWER PLANT**

Sl.No.	Module Specification	Unit Cost (₹)	Maximum Repayment period (Years)	Gestation Period (year)
1	Solar Panel with battery bank	104000	5	Nil
2	Solar Panel without battery bank	54000	5	Nil

**P. SOLAR PUMP MODELS**

Model	Motor Type	Motor Capacity	PV Array	Unit Cost (₹)	Maximum Repayment period (Years)	Gestation Period (year)
<b>a) Shallow Well (Surface) Solar Pumping System</b>						
I	D.C. Motor Pump Set with Brushes or Brushless D.C (BLDC)	1 HP	900 WP	93396	10	Nil
II		2 HP	1800 WP	117454	10	Nil
III		3 HP	2700 WP	159600	10	Nil
I	A.C. Induction Motor Pump Set and a suitable Inverter	1 HP	900 WP	92747	10	Nil
II		2 HP	1800 WP	116514	10	Nil
III		3 HP	2700 WP	156900	10	Nil



b) Deep Well (Submersible) Solar Pumping System						
I	D.C. Motor Pump Set with Brushes or Brushless D.C (BLDC)	1.3HP	1200 WP	96989	10	Nil
II		2 HP	1800 WP	128000	10	Nil
III		3.3 HP	3000 WP	164000	10	Nil
IV		5.3 HP	4800 WP	229000	10	Nil
I	A.C. Induction Motor Pump Set and a suitable Inverter	1.3HP	1200 WP	97400	10	Nil
II		2 HP	1800 WP	122093	10	Nil
III		3.3 HP	3000 WP	159500	10	Nil
IV		5.3 HP	4800 WP	247000	10	Nil

**Terms & Conditions:**

1. GST on various components across various sectors will be applicable as per the GoI directives.
2. GoI keeps updating the model costs in Ministry of Renewable Energy Website, the banks may consult the updated costs in the website before financing.
3. Technical feasibility/guidance needs to be ensured in these activities. The help of Jharkhand Renewable Energy Development Authority (JREDA) may be sought if necessary.







# Integrated Farming System

## Q. Integrated Farming System-

### Model I

#### Financial Analysis of integrated project

1	Total land available for integrated farming	2.5 acres
2	Paddy cultivation in khariff season	1.0 acre
3	Fish farming/ farm pond	0.25 acre
4	Dairy farming, vermi compost, hydroponics	0.2 acre
5	Vegetable cultivation in khariff season	0.9 acres
6	Vegetable cultivation in rabi season	1.9 acres
7	Vegetable cultivation in summer season	0.5 acres
8	Free space for homestead/ other activities	0.15 acre

	Costs / Years	I	II to X
<b>A</b>	<b>Capital Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	96800	0
2	Drip for vegetable farming	170000	0
3	Dairy farming (1+1)	90500	0
4	Vermi compost unit	13500	0
5	Hydroponics unit	41603	0
6	Barbed wire fencing	55875	0
7	Paddy cultivation in 1 acre	0	0
	Subtotal	468278	0
<b>B</b>	<b>Recurring Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Vermi compost unit	5000	5000
4	Hydroponics unit	36885	36885
5	Vegetable farming	170000	170000
6	Paddy cultivation in 1 acre	11800	11800
	Sub total	292334	294334
<b>C</b>	<b>Gross Cost</b>	760612	294334
<b>D</b>	<b>Income-Expenditure Stream</b>		
	<b>Income Stream (In ₹)</b>		



SI No	Items / Years	I	II to X
1	Fish farming in 0.25 acres	40500	45000
2	Dairy farming (1+1)	138050	154850
3	Vermi compost unit	19000	31000
4	Hydroponics unit	62050	62050
5	Vegetable farming	360000	360000
6	Paddy cultivation in 1 acre	30000	30000
	Sub total (Income)	649600	682900
	Expenditure Stream		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Vermi compost unit	5000	5000
4	Hydroponics unit	36885	36885
5	Vegetable farming	170000	170000
6	Paddy cultivation in 1 acre	11800	11800
	Sub total (Expenditure)	292334	294334
E	<b>Net income (In ₹)</b>	357266	388566

**Assessment of Financial viability and bankability**

Sr No	Aspects	Result
1	Net Present value (NPV)	₹ 15.14 lakh
2	Internal Rate of Return (IRR)	350%
3	Loan, taken at 75% of project cost can be repaid in 3 years with 12 months grace period	

**Model II****Financial Analysis of integrated farming project**

1	Total land available for integrated farming	2.5 acres
2	Paddy cultivation in khariff season	1.0 acre
3	Fish farming/ farm pond	0.25 acre
4	Dairy farming, vermi compost, hydroponics	0.2 acre
5	Papaya cultivation under drip	0.5 acres
6	Vegetable cultivation during khariff season	0.4 acres
7	Vegetable cultivation during rabi season	1.4 acres
8	Vegetable cultivation during summer season	0.5 acres
9	Free space for homestead/ other activities	0.15 acre

	Costs / Years	I	II to X
<b>A</b>	<b>Capital Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	96800	0
2	Drip for vegetable farming	185000	0
3	Dairy farming (1+1)	90500	0
4	Vermi compost unit	13500	0
5	Hydroponics unit	41603	0
6	Barbed wire fencing	55875	0
7	Papaya cultivation	3500	0
8	Installation of borewell	120000	0
8	Paddy cultivation	0	0
	Subtotal	606778	0
<b>B</b>	<b>Recurring Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Vermi compost unit	5000	5000
4	Hydroponics unit	0	0
5	Vegetable farming	185000	185000
6	Papaya cultivation	21750	21750
7	Paddy cultivation	11800	11800
	Sub total	292199	294199
<b>C</b>	<b>Gross Cost</b>	898977	294199
<b>D</b>	<b>Income-Expenditure Stream</b>		
<b>Sl No</b>	<b>Items / Years</b>	<b>I</b>	<b>II to X</b>
<b>D.1</b>	<b>Income Stream (In ₹)</b>		
1	Fish farming in 0.25 acres	40500	45000
2	Dairy farming (1+1)	138050	154850
3	Vermi compost unit	19000	31000
4	Hydroponics unit	0	0

5	Vegetable farming	390000	390000
6	Papaya cultivation	154630	173958.75
7	Paddy cultivation	30000	30000
	Sub total (Income)	772180	824809
<b>D.2</b>	<b>Expenditure Stream (In ₹)</b>		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Vermi compost unit	5000	5000
4	Hydroponics unit	0	0
5	Vegetable farming	185000	185000
6	Paddy cultivation	11800	11800
	Sub total (Expenditure)	270449	272449
E	<b>Net income (In ₹)</b>	501731	552360

#### Assessment of Financial viability and bankability

Sr No	Aspects	Result
1	Net Present value (NPV)	₹ 21.99 lakh
2	Internal Rate of Return (IRR)	526%
3	Loan, taken at 75% of project cost can be repaid in 3 years with 12 months grace period	



**Model III****Financial Analysis for entire integrated project**

1	Total land available for integrated farming	2.5 acres
1.1	Paddy cultivation in khariff season	0.5 acre
1.2	Fish farming/ farm pond	0.25 acre
1.3	Dairy farming, vermi compost, hydroponics	0.2 acre
1.4	Papaya cultivation under drip	0.5 acre
1.5	Vegetable cultivation during khariff season	0.4 acre
1.6	Vegetable cultivation during rabi season	1.4 acres
1.7	Vegetable cultivation during summer season	0.5 acre
1.8	Broiler poultry farming in 0.5 acre throughout the year	0.5 acre
1.9	Free space for homestead/ other activities	0.15 acre

	Costs / Years	I	II to X
<b>A</b>	<b>Capital Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	96800	0
2	Drip for vegetable farming	185000	0
3	Dairy farming (1+1)	90500	0
4	Vermi compost unit	13500	0
5	Hydroponics unit	41603	0
6	Barbed wire fencing	55875	0
7	Papaya cultivation	3500	0
8	Installation of borewell	120000	0
9	Broiler poultry	61000	0
10	Paddy cultivation	0	0
	Subtotal	667778	0
<b>B</b>	<b>Recurring Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Vermi compost unit	5000	5000
4	Hydroponics unit	0	0
5	Vegetable farming	185000	185000
6	Papaya cultivation	21750	21750
7	Broiler poultry	153750	153750
8	Paddy cultivation	11800	11800
	Sub total	445949	447949
<b>C</b>	<b>Gross Cost</b>	1113727	447949

**D Income-Expenditure Stream**

SI No	Items / Years	I	II to X
<b>D.1</b>	<b>Income Stream (In ₹)</b>		
1	Fish farming in 0.25 acres	40500	45000
2	Dairy farming (1+1)	138050	154850
3	Vermi compost unit	19000	31000
4	Hydroponics unit	0	0
5	Vegetable farming	390000	390000
6	Papaya cultivation	154630	173958.75
7	Broiler poultry	174960	174960
8	Paddy cultivation	30000	30000
	Sub total (Income)	947140	999769
<b>D.2</b>	<b>Expenditure Stream (In ₹)</b>		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Vermi compost unit	5000	5000
4	Hydroponics unit	0	0
5	Vegetable farming	185000	185000
6	Papaya cultivation	21750	21750
7	Broiler poultry	153750	153750
8	Paddy cultivation	11800	11800
	Sub total (Expenditure)	445949	447949
<b>E</b>	<b>Net income (In ₹)</b>	501191	551820

**Assessment of Financial viability and bankability**

Sr No	Aspects	Result
1	Net Present value (NPV)	₹ 21.43 lakh
2	Internal Rate of Return (IRR)	331%
3	Loan, taken at 75% of project cost can be repaid in 3 years with 12 months grace period	

**Model IV****Financial Analysis of integrated project****Paddy in Khariff season+Small dairy+fish farming+ Gram in Rabi season**

1	Total land available for integrated farming	2.5 acre
2	Paddy cultivation in khariff season	2.0 acre
3	Fish farming/ farm pond	0.25 acre
4	Dairy farming (1+1)	0.2 acre
5	Cultivation of Gram in rabi season	1.0 acre
6	Free space for homestead/ other activities	0.05 acre

	Costs / Years	I	II to X
<b>A</b>	<b>Capital Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	96800	0
2	Dairy farming (1+1)	90500	0
3	Paddy cultivation in 1 acre	0	0
4	Cultivation of Gram in rabi season	0	0
	Subtotal	187300	0
<b>B</b>	<b>Recurring Costs (In ₹)</b>		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Paddy cultivation in 1 acre	19900	19900
4	Cultivation of Gram in rabi season	6700	6700
	Sub total	95249	97249
<b>C</b>	<b>Gross Cost (In ₹)</b>	282549	97249

**D Income-Expenditure Stream****Income Stream**

Sl No	Items / Years	I	II to X
1	Fish farming in 0.25 acres	40500	45000
2	Dairy farming (1+1)	138050	154850
3	Paddy cultivation in 1 acre	42000	42000
4	Cultivation of Gram in rabi season	12000	12000
	Sub total (Income)	232550	253850

Sr No	Aspects	Result
1	Net Present value (NPV)	₹ 6.05 lakh
2	Internal Rate of Return (IRR)	313%
3	Loan, taken at 75% of project cost can be repaid in 3 years with 12 months grace period	313%

	Expenditure Stream		
1	Fish farming in 0.25 acres	25940	27940
2	Dairy farming (1+1)	42709	42709
3	Paddy cultivation in 1 acre	19900	19900
4	Cultivation of Gram in rabi season	6700	6700
	<b>Sub total (Expenditure)</b>	<b>95249</b>	<b>97249</b>
<b>E</b>	<b>Net income (In ₹)</b>	<b>137301</b>	<b>156601</b>



## Contact Detail of DDMs in Jharkhand

Sr. No	Name of the District	Name of the Tagged District/Districts	Name of the DDM/DDM(R)	Mobile No.	E-mail
1	Bokaro		Shri Philmon Bilung	9993011205	bokaro@ nabard.org
2	Chatra		Shri Mrityunjay Bakshi	9654396091	chatra@nabard.org
3	Deoghar	Jamtara	Shri Anand Kumar	9459587562	deoghar@nabard.org
4	Dhanbad		Shri Ravi Kumar Lohani	8894703861	dhanbad@nabard.org
5	Dumka		Shri Subhendu Behera	9692607553	dumka@ nabard.org
6	East Singhbhum	SaraikelaKharsawan	Smt. Jasmika Baskey	9438382822	eastsinghbhum@ nabard.org
7	Garhwa		Shri Deepak Paswan	9031757594	garhwa@nabard.org
8	Giridih		Ashutosh Prakash	8609505580	giridih@nabard.org
9	Godda		Smt. Nutan Raj	8825309043	godda@nabard.org
10	Gumla		Shri Ravi Shankar	9910543431	gumla@nabard.org
11	Hazaribagh		Smt. Richa Bharti	7761031747	hazaribagh@nabard.org
12	Koderma		Shri Mozammil Hussain	9464569148	koderma@nabard.org
13	Lohardaga		Shri Sanjay Kumar Trivedi	8011005335	lohardaga@nabard.org
14	Palamau		Shri Shaleen Lakra	7978094231	palamau@nabard.org
15	Ramgarh		Smt. Deepa Priyanka	7091194666	ramgarh@nabard.org
16	Sahibganj		Shri Pramod Kumar	9867284208	sahibganj@nabard.org
17	Simdega		Shri Sarang Dhar Patra	9406007436	simdega@nabard.org
18	West Singhbhum		Shri Saket Kumar	9525985764	westsinghbhum@nabard.org
19	Ranchi		Shri Dominic Lugun	7992345992	dominic.lugun@nabard.org
20	Khunti		Smt. Shivani Roshan	9987288942	khunti@nabard.org
21	Latehar		Shri Jeet R Soren	7004605275	latehar@nabard.org
22	Pakur		Shri Prem Kumar	9934709701	pakur@nabard.org



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Socio-economic Development

Natural Resource Management  
Food Processing  
Banking & Finance  
Skills for Livelihood  
International Business  
Value Chain Management  
Infrastructure Monitoring  
Climate Change

Technical Support  
Agency to MoRD,  
State Govts under  
DDU-GKY

Capacity Building of  
Bankers,  
Community Based Org.  
Govt. Officials, Etc.

Diagnostic &  
Sectoral  
Studies

Potential Surveys  
Need Assessment  
Baseline Survey  
Market Survey  
Socio-economic  
Assessment

Preparation of Detailed  
project report

Feasibility/Techno-financial  
Study

Project  
Management  
Consultancy

PMA  
for  
Setting Up  
of Mega  
Food  
Park

GIS Based  
Mapping/  
Monitoring

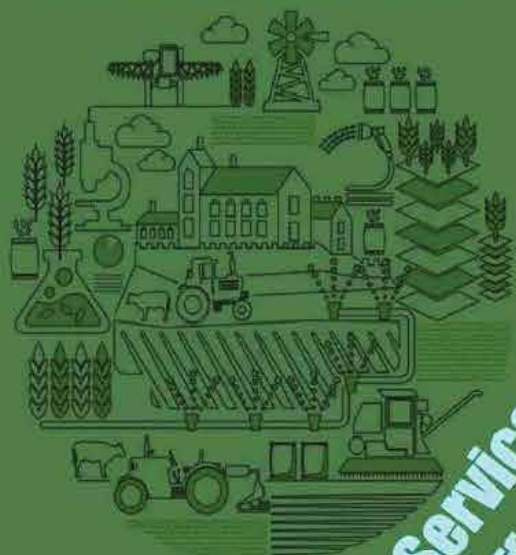
Preparation of IT Policies,  
Security Policies, etc.

Gender & Social  
Inclusion Plans

Third Party Monitoring  
Impact Evaluation

Climate Resilient Planning  
Preparation of Concept Notes  
Environment &  
Social Management  
Plans

Services  
Offered



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