





कृषि और संबंधित क्षेत्र निवेशों की इकाई लागत 2023-24

Unit Cost on Investment in Agricultural and Allied activities 2023-24

राज्य - कर्नाटक

State - Karnataka

राष्ट्रीय कृषि और ग्रामीण विकास बैंक National Bank for Agriculture and Rural Development Title Unit Cost of Investment in Agricultural & Allied

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KARNATAKA

Unit Costs - 2023-24



National Bank For Agriculture And Rural Development Karnataka Regional Office Bengaluru



दृष्टि

ग्रामीण समृद्धि के लिए राष्ट्रीय विकास बैंक

ध्येय

सहभागिता, संधारणीयता और समानता पर आधारित वित्तीय और गैर-वित्तीय सहयोगों, नवोन्मेषों, प्रौद्योगिकी और संस्थागत विकास के माध्यम से समृद्धि लाने के लिए कृषि और ग्रामीण विकास का संवर्धन.

VISION

Development Bank of the Nation for Fostering Rural Prosperity

MISSION

Promote sustainable and equitable agriculture and rural development through participative financial and non-financial interventions, innovations, technology and institutional development for securing propsperity

Disclaimer

NABARD does not accept any financial liability to anyone using this report for any purpose. The costs and parameters suggested are based on information available with NABARD. All Unit costs are indicative in nature and there may be variations based on field /local conditions. Banks/ government agencies may assess the credit requirement, considering the field level situations and keeping in view the technical feasibility, financial viability and also the bankability of the investments.



प्राक्कथन

केंद्रीय बजट में वार्षिक घोषणाओं के माध्यम से भारत सरकार कृषि में ऋण-प्रवाह बढ़ाने पर विशेष बल दे रही है। केंद्रीय बजट 2023 में माननीय वित्त मंत्री ने वर्ष 2023-24 के दौरान ₹20 लाख करोड़ के कृषि ऋण लक्ष्य की घोषणा की है। कृषि क्षेत्र में पूंजी-निर्माण में निवेश ऋण की विशेष भूमिका रहती है और पिछले कुछ वर्षों में निवेश ऋण सकारात्मक रुझान के साथ बढ़ा है। कृषि और संबद्ध गतिविधियों में छोटे निवेश हेतु ऋण प्रदान करने में बैंकों की सहायता/ मार्गदर्शन के लिए विभिन्न गतिविधियों की इकाई लागतें इस प्रकार तय की जाती हैं कि वे आर्थिक रूप से व्यवहार्य और वित्तीय रूप से सुदृढ़ हों। नाबार्ड, कर्नाटक क्षेत्रीय कार्यालय ने विभिन्न हितधारकों, यथा- बैंकों, कृषि विश्वविद्यालय, कर्नाटक सरकार के लाइन विभागों आदि के साथ परामर्श करते हुए वर्ष 2023-24 में राज्य में कृषि और संबद्ध क्षेत्रों की विभिन्न गतिविधियों के लिए इकाई लागतों का निर्धारण किया है। राज्य स्तरीय इकाई लागत समिति (एसएलयूसीसी) द्वारा अनुमोदित ये लागतें सांकेतिक हैं। वित्तीय संस्थाएँ और सरकारी एजेंसियाँ वर्तमान दरों और बाज़ार में हुए परिवर्तनों के अनुसार इनमें बदलाव कर सकती हैं।

मैं कर्नाटक सरकार के सभी विभागों, बैंकों, प्रगतिशील किसानों, आईसीएआर संस्थाओं, कॉमोडिटी बोर्ड और नाबार्ड के तकनीकी अधिकारियों के सहयोग के लिए उनके प्रति आभार व्यक्त करता हूँ। दस्तावेज़ में उल्लिखित दरों को और प्रासंगिक बनाने के लिए पाठकों के सुझावों का स्वागत है।

मुझे आशा है कि कर्नाटक राज्य के कृषि क्षेत्र में निवेश ऋण का प्रवाह में यह पुस्तिका बैंकर साथियों के लिए एक उपयोगी संदर्भ साबित होगी और हम राज्य में बेहतर पूंजी निर्माण सुनिश्चित कर पाएँगे।

टी रमेश मुख्य महाप्रबंधक



FOREWORD

The GoI has been laying emphasis on enhancing credit flow to agriculture by way of annual announcement in union budget. In the Union Budget 2023, the Hon'ble FM has announced an agriculture credit target of Rs.20 lakh crore during 2023-24. During the last few years, the investment credit under agriculture has been showing increasing trend playing a vital role in facilitating capital formation in agriculture. In order to facilitate/guide banks to finance small investments in agriculture and allied sub-sectors, unit cost for various activities is fixed which are economically feasible and financially viable. NABARD, Karnataka Regional Office has fixed Unit Costs for various investment activities in agriculture & allied sectors in the state for the year 2023-24 through a consultative process involving all the stakeholders viz. Banks, Agriculture university, line departments of Government of Karnataka etc. These costs approved by the State Level Unit Cost Committee (SLUCC) are indicative in nature, and the financing institutions and government agencies may modify as per the prevailing rates and market changes.

I acknowledge the support and co-operation extended by all the departments of Government of Karnataka, Banks, progressive farmers, ICAR Institutions, Commodity Boards and Technical Officers of NABARD. We welcome feedback from users in further refining the various costs indicated.

I hope this booklet will be a guiding force for bankers in improving the flow of investment credit in Agriculture sector resulting in greater capital formation in Karnataka State.

T Ramesh Chief General Manager

CONTENTS

No	Sector	Page
Chapter 1	Water Resources	1-5
Chapter 2	Land Development	6-9
Chapter 3	Farm Mechanization	10-12
Chapter 4	Plantation & Horticulture	13-21
Chapter 5	Sericulture	22-24
Chapter 6	Forestry	25-26
Chapter 7	AH- Dairy	27-33
	AH- Poultry	34-37
	Ah- Sheep, Goat, Piggery and Others	38-46
Chapter 8	Fisheries	47-49
Chapter 9	Storage Structures	50
Chapter 10	Renewable sources of energy	51-53

Water Resources





Chapter 1- Water Resources

Sr. No	Particulars		Unit Cost (₹)	Repayment/Remarks
1	Bore well (BW) a) 152 mm dia. and depth 200 m b) 152 mm dia. and depth 300 m		144000	11 to 15 years with 11 months gestation period (GP)
	b) 152 mm dia	a. and depth 500 m	227000	
2	Pump sets		As per prevailing market rates	
3	Renovation/ I	Deepening of Wells	33000	5 years including 11 months GP
4	Pump house with A.C Roof $(2m \times 2m \times 2.1m) \rightarrow 3 \text{ HP}$ $(2.5m \times 2.5m \times 2.1m) \rightarrow 5 \text{ HP}$ $(2.7m \times 2.7m \times 2.4m) \rightarrow 10 \text{ HP}$		22000 34000 42900	
5	Storage tank (3.5 m x3.5 m x2.5m)		40000	9 years including 11 months GP
6	Small lift irrig (command are	ation schemes ea : 10 - 40 ha)	66000	7 to 9 years including 11 months GP
7	Rain water harvesting-cum- artificial recharge structures for bore wells		51000	5 years with 1 year GP
8	Dug wells	1.5m diameter and 5m depth (RCC Rings)	50000	Suitable for Alluvial formations.
O	Dug wens	Diameter: 5m Depth: 9 m (Steining)	155000	Suitable for Hard Rock Areas

Drip Irrigation system based on spacing norms

Sr. No.	Spacing (m)	Unit Cost per ha (₹)	Repayment
i	12 X 12	26000	
ii	10 X 10	29000	
iii	9 x 9	31000	
iv	8 x 8	36000	
V	6 x 6	42000	11-15 years depending on the
vi	5 x 5	42000	age of crop/plantation with
vii	4 x 4	48000	adequate GP
viii	3 x 3	60000	_
ix	2.5 x 2.5	65000	
X	2 X 2	71000	
xi	1.20 x 1.20	77000	
xii	0.90 x 0.90	114000	

Sr. No.	Spacing (m)	Unit Cost per ha (₹)	Repayment
xiii	0.6 x 0.6	135000	
xiv	2.5 x 0.6	76000	
XV	1.8 x 0.6	98000	
xvi	1.2 x 0.6	132000	

Sprinkler Irrigation systems

Sr.	Particulars	Unit Cost per ha (₹)	Repayment
No.		_	
1	Field Crops (Vegetables/	Pulses)	
	63 mm HDPE pipes	31000	10-15 years and 11 months GP
	75 mm HDPE pipes	37000	
2	Coffee/ Tea	·	
	90 mm HDPE pipes	69300	

Special terms and conditions

- For dug wells / bore wells in over-exploited, critical and semi-critical areas, permission needs to be obtained from the Hydro geologists / Dept. of Mines & Geology and positively with the prior approval of the Karnataka Ground Water Authority.
- 2. Star rated pump sets may be promoted and additional cost on energy efficient pump sets may be considered as per prevailing market conditions.
- 3. The minimum spacing to be maintained between dug wells / bore wells, other minor irrigation structures shall be as under.
 - a. Between two Dug wells with or without pump set: 180 m
 - b. Between two Bore wells with pump sets: 250 m
 - c. Between Dug wells & Bore wells: 215 m

4. Renovation/ Deepening of Wells (DoW)

- 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 program.
- The spacing norms between wells may be adhered to under DOW 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 norm

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

7. Selection and Installation of Pump sets

- The bank shall ensure that the pump sets financed under the scheme are selected and installed as per BIS: 10804-2018 or latest editions.
- Wherever loan is advanced for replacement of existing pump set by new pump set or for replacement of diesel pump set by electric pump set, the bank shall ensure that there is no change in the HP of the pump set and that the new pump set installed is as per BIS 10804-2018, or latest edition.
- Bank shall ensure that the spacing criteria, as stipulated, are adhered to, for the loans extended for pump sets also.
- Wherever loans are advanced for standby pump set, the bank may ensure that the standby unit is also selected as per BIS 10804-2018.
- Where higher HP pump set is required for use other than irrigation, with common prime mover, total HP of the pump set selected for agricultural use shall not exceed 1.5 times the HP required for irrigation purpose, subject to a maximum of 10HP.
- Capacitors: The electric motor financed should always be provided with a starter and a capacitor matching the motor. The following KVAR rating capacitors are recommended for use:

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Below 3 HP - 1 kvar
3 HP to 5 HP - 2 kvar
5 HP to 7.5 HP - 3 kvar
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8. After Sales Services

The bank shall ensure that adequate after-sales services and repair facilities are provided by the manufacturers / dealers installing the pump set on beneficiaries' wells.

9. Water Lifting Permission

Wherever financing pump sets for lifting water from river/ canal is involved, a letter from the competent authority of the Department/ Agency concerned of the State Govt. permitting the beneficiary to lift water from river/ canal and indicating the period up to which such permission is provided should be obtained and furnished to the financing bank before sanctioning the loan.

10. Micro Irrigation Systems

(a) Drip Irrigation

- The bank should ensure that only a technically competent and approved firm or person designs and installs the system at the field level.
- The installing agency should assess the water requirement of each plant, optimum crop geometry, etc. and design the efficient system accordingly. The bank should insist for a field layout map showing the benefiting area and item-wise cost estimate.
- Availability of design discharge of suitable chemical and physical quality on a long-term basis should be ensured for smooth operation of the system.
- The installing agency should furnish performance guarantee for the efficient operation of the system for a minimum of 3 years' period as also ensure timely and adequate post sales-service for trouble-free working of the system.
- The bank should carry out periodic monitoring of the implementation and assess the performance of the system at the field level.
- Bank should ensure to safeguard the pipes (main and lateral drips), emitters, etc., against theft, robbery, fire, etc.
- The system components to be installed should conform to the BIS Specification.

(b) Sprinkler Irrigation

- The bank should ensure that adequate water of suitable quality to cover the envisaged area is available at the nearest location.
- The design of sprinkler system for the proposed cropping pattern should be done by a technically competent agency /person taking into consideration the source and availability of water, wind velocity in different seasons, soil conditions, agro-climatic situations, etc. to ensure installation of most economical system at the farm level.
- The components of the system including pipes should conform to BIS standards.
- 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.
- The firm should extend regular post sales service for maintenance.
- The bank should conduct periodic monitoring visits to assess the performance of the system and take corrective steps, wherever required.

Land Development





Chapter 2- Land Development Contour Bunding

Sr. No.	Slope	Per ha length	No. of stone outlets required	Unit Cost per ha (₹)	Repayment
1	2%	200	2	12900	
2	3%	222	3	15900	
3	4%	250	3	17200	5 – 7 years with 1-year GP
4	5%	333	4	22900	1-year Gr
5	6%	400	4	25900	

On Farm Development (OFD) Works

Sr. No.	Slope	Unit Cost per ha (₹)	Repayment
1	2% - 4%	76000	5 – 7 vears
2	4% - 6%	80000	5 – 7 years with 1 year GP

Farm Ponds

Sr. No.	Size of the Farm Pond	Unit Cost for Black soils (₹)	Unit Cost for Red soils (₹)	Repayment
1	10m x 10m x 3m	30000	28000	5 – 7 years with 1-year GP
2	12m x 12m x 3m	43000	39500	5 – 7 years with 1-year GP
3	15m x 15m x 3m	59000	54000	5 – 7 years with 1-year GP
4	21m x 21m x 3m	126000	114000	5 – 7 years with 1-year GP
5	29m x 29m x 3m	260000	232000	5 – 7 years with 1-year GP

Composting & Vermi-compost Unit

Sr. No.	Specifications	Unit Cost (₹)	Repayment
1	Composting	11000 - 22000*	7 years with 1 year GP
2	Vermi-compost -3 m x 1.2 m x 1 m (1.27 cu. m)	12,000	3 – 5 years with 1 year GP

^{*}Unit Cost varies depending on the type of land and the number of tanks.

Gully Plugs

Sr. No.	Туре	Length	Specifications	Unit Cost (₹)	Repayment
1	Stone Gully Plugs(SGP)	1 m	Cost varies with height and width	11,000-16000	5 – 7 years
3	Earthen Gully Plugs (EGP)	6 m	Cost varies with height and width	1500	with 1 year GP

Other activities

Sr. No.	Activity	Unit Cost per ha (₹)	Repayment
1	Tank silt application	24800	
2	Reclamation of alkali/saline soils	30000 - 35000	3 year with 1 year GP
3	Plastic mulching	24000 - 32000	
4	Fencing (Barbed wire with stone posts/cement pillars)	250/m	Repayment is depending on the crop

Azolla & Vermi hatchery

Sr. No.	Activity	Unit Cost (₹)	Repayment
1	Azolla (1 TPA- 2 pits)	156000	5 years with one year GP
2	Vermi hatchery (320 TPA)	475000	5 years with no GP

Special terms and conditions

- Banks may finance land development activities as per the cost norms indicated in the relevant Central Scheme. Physical norms for land development works (to be decided as per local rates, DSR/SOR of State Govt./Department)
- The bank shall satisfy itself that the required technical guidance and supervision is made available by the concerned department of the State Government.
- Field to field level irrigation is discouraged and separate field channels are used to convey irrigation water to various parts of holding.

Farm Mechanization





Chapter 3 - Farm Mechanisation

Sl. No.	Machinery / Implement	Unit Cost (in lakhs)	Repayment
1	Tractor with accessories - 15 to 25 HP	2.50 - 4.50	
2	25 to 35 HP	4.50 - 6.00	
3	35 to 45 HP	6.00-7.80	7 to 9 years with 1
4	45 to 55 HP	7.80-8.50	year GP
5	55 to 60 HP	8.50-9.50	
6	Trolley – two wheel hydraulic	1.00 - 1.50	
7	Power tiller 6 to 12 HP	1.00 - 2.30	5 – 7 years with 1 year GP
8	Seed cum fertilizer Drill	0.55-0.90	5 – 7 years with 1 year GP
9	(Power tiller/ Tractor operated) Paddy Transplanter (4, 6 & 8 rows)	1.5- 3.0	5 – 7 years with 1 year GP
10	Power weeder (self- propelled/tractor drawn)	0.40-0.55	3-5 years
11	M. B. Plough (2 / 3 furrows- non hydraulic)	0.15 - 0.60	
12	Reversible M. B. Plough (2 / 3 furrowsfixed/hydraulic)	0.80 - 2.50	
13	Tractor drawn Disc Plough (3 Disc, Reversible)	0.90-1.5	Tractor with minimum 2-3 implements are
14	Tractor drawn Disc Harrow	0.70-0.90	required to be
15	Cultivator(cost will vary depending on rigid or spring loaded)	0.40-0.75	purchased
16	Rotavator (540 and 1000 rpm PTO speed)	0.85-1.40	
17	Thresher (upto 10 HP- Tractor/Engine Operated)	1.2-2.00	
18	Groundnut decorticator	0.25-0.30	
	(manual, cost depends on capacity)		
19	Groundnut decorticator(powered, cost depends on capacity)	0.55-1.50	
20	Arecanut climbing machine (manual, operated from ground)	0.10-0.15	
21	Combine Harvesters	As per make HP	7 - 9 years with one year GP

Unit Cost 2023-24 Custom Hiring Centre

Machinery	Total (₹)	Repayment
Tractor –35 to 45 HP		
Tractor –15 to 25 HP		
MB plough		
Disc Plough		
Levelers		
Cultivators	The costs will vary depending	7-9 Years with 03 months to 1 year GP
Seed cum fertilizer drill	on the combination, capacity, make etc.	based on the seasonality of
Laser Guided Land Leveler		agricultural operations in the
Thresher		project area and the envisaged cash flows
Sprayer		
Shed and office premises		
Servicing tools		

Special Terms and Conditions - Farm Mechanization

- The costs are indicative and banks may finance the activities based on the prices quoted by dealers comprising discounts and accessories.
- The banks may also refer to the Department of Agriculture, GoK guidelines on the rate norms, empaneled vendors list and scheme guidelines for availing subsidy for Farm Mechanization.
- Selection of the machinery will depend upon the area, major crops, skilled and unskilled labour availability, soil type etc.
- While financing tractors/power tillers & farm equipment's the banks may ensure the respective BIS standards are adhered too.
- Banks may finance FM activities as per the crops grown, presence of other CHCs & concentration of farm machinery in the area.

Horticulture & Plantation



Sl.	Сгор	Spacing	Population			Year			Unit Cost per acre	Repayment
No	Стор	Spacing	/acre	I	II	III	IV	V	(₹)	Кераушен
1	Citrus	6x6m	110/acre	43173	18771	12127	15601	15867	105500	9 years including 5 years GP
2	Grape- Seedless varieties	3m x 1.8m	740	331850	177670				509000	7 years including 2 years GP
3	Grape- Bangalore Blue	3.3m x 3.3m	360	272067	134166				406000	7 years including 2 years GP
4	Mango	9m x 9m	50	52982	14516	12732	13952	14952	109000	10 years including 5 years GP
5	Mango(High Density Planning)	5m x 5m	160	71554	22535	32753	40215	47105	214000	10 years including 5 years GP

Sl.	Стор	Spacing	Population			Year			Unit Cost per	Repayment
No	•	1 0	/acre	I	II	III	IV	v	acre (₹)	1 7
6	Pomegranate	3.5m x 3.5m	326	130655	124345				255000	9 years including 3 years GP
7	Sapota	9m x 9m	50	51100	9287	13202	14102	14502	100000	10 years including 5 years GP
8	Guava	8m x 8m	60	44000	15750	15750	9500		85000	11 years including 7 years GP
9	Guava (High Density)	2.5m x 2.5m	640	88000	32000	26000	16000		162000	10 years including 5 years GP
10	Custard Apple	2.5 m x 5 m	320	75000	18000	16000			109000	7 years including 5 years GP

Sl.	Crop	Spacing	Population /acre			Year			Unit Cost per acre	Repayment
No			acre	I	II	Ш	IV	V	(₹)	
11	Drum stick	3.5m x 3.5m	326	25200	15750				41000	5 years including 2 years GP
12	Ber	5 m x 5m	160	44272	10380	9470	7868		72000	9 years including 5 years GP
13	Dragon fruit	2.5 m x 2.5 m	400 poles	675972	38448				715000	9 years including 5 years GP
14	Aonla	6m x 6m	110	32583	10092	9805	8233		60700	10 years including 6 years GP
15	Jamun	8m x 8m	62	37450	21400	10700			70000	7 years including 4 years GP

Sl.	Стор	Spacing	Population /acre			Year			Unit Cost per	Repayment
No			/acre	I	II	III	IV	v	acre (₹)	
16	Papaya	3m x 3m	444	59400	21600	18360			99000	5 years including 2 years GP
17	Jackfruit	10m x 10m	40	27500	11000	5500			44000	11 years including 2 years GP

Plantation Crops

		Year								Unit Cost	
Sl. No	Стор	Spacing	Population /acre	I	II	III	IV	v	VI	per acre (₹)	Repayment
1	Coconut	8m x 8m	60	42993	9982	7882	11087	11882	13882	98000	12 years including 7 years GP
2	Oil Palm	9m x 9m	50	37776	20650	29251	29548			117000	12 years including 5 years GP

			Population /acre	Year						Unit Cost	
Sl. No	Стор			I	II	III	IV	v	VI	per acre (₹)	Repayment
3	Coffee (Robusta)	3m x 3m (10ft x 10ft)	444	43000	28000	15000	22000			108000	11 years including 5 years GP
4	Coffee (Arabica)	1.5m x 1.5m (5ft x 5ft)	1780	51086	22806	22500	22500	24000		143000	12 years including 5 years GP
5	Cashew	7m x 7m	81	41563	14214	11777	14549	19769		102000	10 years 6 years GP

Spices

Sl. No	Сгор	Spacing	Population/acre	Repayment	Unit Cost per acre (₹)
	Pepper (intercrop with Arecanut)	3m x 3m	444	8 years including 4 years GP	144000
	Pepper (intercrop with Coffee)	6m x 6m	111	8 years including 4 years GP	73000

3	Cardamom	1.8m x 1.8m	1230	8 years including 3 years GP	154000
4	Curry leaf	3m x 1.5m	880	7 years including 3years GP	40000

Floriculture

Sl. No	Стор	Spacing	Population	Unit Cost per acre (₹)	Repayment
1	Jasmine	1.5 m x 1.5 m	1780	77000	4 years including 1 year GP
2	Rose	0.75 m x 0.75 m	7100	163000	5 years with 1 year GP

Apiary

Activity	Spacing(m)	Population/ 1000 Sq.m	Unit Cost (₹)	Repayment
Apiary	25 x 25	50	65000	4 years with 1 year GP

Vegetable Nursery

Activities	Unit Cost (Rs.)
Vegetable nursery (shade net) –0.5 acre model	8,05,000

Protected Cultivation

	Cost Estimates (₹/sq. n	ı)			
Стор	> 2080 sq.m to 4000 sq.m	>560 sq.m to 1056 sq.m	Up to 560 sq.m	Repayment	
Naturally Ventillated Poly House (NVPH) with 2 side corridor and 1.6mm gutter connected	900	995	1135	10 years with one year GP	
NVPH (2 side corridor and 0.5 mm gutter connected)	800	905	1125	10 years with one year GP	
Shade net house (2-side corridor)	440			10 years with one year GP	

Disclaimer: The above cost estimates are indicative and are recommended based on the economics given by NHM. Hence, costs may vary based on the adopted technologies.

In addition to the above, investment Cost of Protected Cultivation, the average cost of Production for 1st year for the following crops -

- (a) Flowers ₹ 370/Sq.m
- (b) Vegetables ₹ 120 /Sq.m

Note: The above cost estimates may vary depending on the type of crop and variety.

Special terms and conditions

- The financing bank may consult the State Department of Horticulture or the concerned Commodity Board to ensure technical feasibility of the crop investment.
- The bank shall satisfy itself that planting material of required quantity and quality, procured by the borrowers are from reliable sources such as nurseries of Agricultural Universities or State Government or any other recognized private nursery.
- 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 expenditure.
- Suitable inter crops may be taken up during the gestation period of the main crop, wherever feasible.
- Mixed cropping shall be encouraged, wherever possible, as in the case of coffee, arecanut, coconut etc.
- A suitable tie-up arrangement can be tried with the marketing agency concerned for recovering the loan installments with the concurrence of the borrowers.
- Protected cultivation- The Unit Costs does not include available subsidy component. Banks may ensure convergence of
 credit with ongoing subsidy schemes & Banks need to evaluate the economic viability of the project based on the
 prevailing market conditions. Unit Cost has been calculated for top ventilated type GI Structure, gutter connected, 200
 micron UV Stabilised poly sheet including shade net.

Sericulture



Chapter 5 – Sericulture

1. Mulberry cultivation and rearing - one acre model

Sr.	Particulars	Total	Repayment
No		Cost per	
		acre (₹)	
	On farm activities : Mulberry cultivation and		6 years with 1
	rearing		year GP
1	Mulberry cultivation (one acre) – first year	60000	
2	Rearing shed size- 1000 sq. ft (50' x 20' x 15')	809000	
3	Rearing stand and equipment (Type-1: 13.5 m x	82200	
	1.60 m x 2.25 m)		
4	Rearing cost capitalized for one crop	21800	
	Total:	973000	

2. Chawki Rearing Centre - 5000 Disease Free Layings (DFLs) per batch

Sr.	Particulars	Unit	Quantity	Unit	Total	Remarks
No.				price (₹)	Cost (₹)	
I	Capital cost					Cost varies
a.	Cost of Building	Sq.	1200	600	720000	with
		ft				quantity &
b	Establishment of	Acre	2	60000	120000	unit price.
	mulberry garden					4 Years with
c	Rearing equipment		LS		617000	6 months
II	Recurring cost		3	60100	180300	GP
	capitalized (40 days)					
	Total cost (I				1637000	
	(a+b+c)+II)					

Special terms and conditions

The terms and conditions indicated below are for area based sericulture development program:

- The borrowers may be identified in consultation with the State Department of Sericulture/Central Silk Board, especially in non-traditional zones/districts.
- While financing for seed cocoon production, ensure that the scheme area is a notified seed area.
- Ensure that the borrowers selected have adequate source of irrigation while financing for mulberry cultivation under irrigated conditions. If necessary, water saving irrigation system like Drip and Sprinkler may be suggested, wherever feasible, and the required credit assistance extended.
- Improved High Yielding varieties of mulberry and silkworm races may be insisted upon under irrigated conditions.

- Supply of planting material of specified mulberry variety may be ensured through Government Seed Farm or reputed private sources.
- The financing bank may ensure that there is adequate supply of quality disease free silkworm eggs (DFLs).
- The borrowers should be included under the ongoing tripartite system to ensure proper recovery of loan.
- The financing bank may ensure that a sound/competitive marketing infrastructure is available in the scheme area and the farmers are not required to carry their cocoons to a far-off market.



Forestry



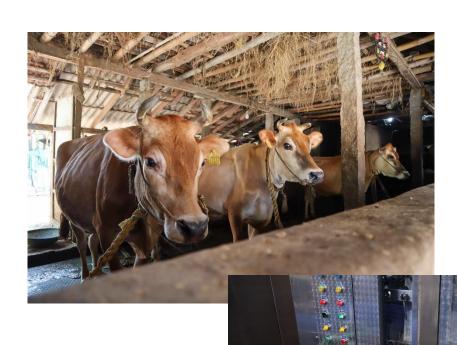


Chapter 6- Forestry

Sr. No.	Сгор	Spacing	Population per ha	Total Cost (₹)	Repayment
1	Sandalwood (Intercrops and Host plants of 500 each)	4.47 m x 4.47 m	500	1,50,000	15 years including 14 years GP
2	Melia dubia	3 m x 3 m	1111	1,22,000	7 years including 6 years GP
3	Bamboo	5 m x 5m	400	63,000	8 years including 5 years GP
4	Bamboo Tissue Culture	5 m x 5m	400	72,000	8 years including 5 years GP
5	Teak	2 m x 2m	2500	1,88,000	13 years including 7 years GP
6	Mahogany	4.57 m x 4.57m	478	90,000	10 years including 9 years GP
7	Silver Oak	3 m x 3m	1111	1,23,000	7 years including 6 years GP

- Forest Department suggests that teak cultivation should be grown preferably along with the Agriculture/Horticulture crops as these species have longer gestation period compared to other fast-growing species.
- While arriving at the cultivation cost of Sandalwood, the cost of following intercrops/host plants are taken into consideration.
 - 1.Guest plant (Ist stage) 500 No. of plants/ha Toor dal plants
 - 2. Intermediate plants (Medium term) 500 No. of plants/ha Drumstick/Curry leaf/Mulberry/Guava, etc.
 - 3. Host (Long term) 500 No. of plants/ha Grafted mango/Jamun/Jackfruit/Chikkoo/Amla/Custard apple, etc.
- Host/Intercrops can be selected in different regions based on different Agro-Climatic conditions
- In case of Sandalwood plantation, protection cost of plantation after the 10th year for appropriate fencing may also be taken into account.
- Further, the Unit Cost may vary for the different agro climatic regions and on the locality specific requirement/conditions.
- Farmers should be encouraged to take up agroforestry activities particularly in the initial years to ensure steady flow of cash to the farmers.

Animal Husbandry Dairy



Chapter 7 – Animal Husbandry

1. AH – Dairy

Dairy – One animal unit

A. Cross bred Cows (CB Cows)	Unit Cost (₹)	Repayment
HF Crosses 11-13 lpd	75000	
Jersey Crosses - 9 to 10 lpd	70000	
B. She buffaloes		
Graded Murrah yielding – 10-12 lpd	80000	5 years'
Surti/ Dharwad yielding - 6 to 8 lpd	50000	including 6 months GP
C. Indigenous cows		months of
Malnad gidda (yield 0.8 to 1 lpd)	13000	
Hallikar	40000	
Deoni	45000	
Gir, Sahiwal, Tharparkar	60000	

Dairy- Two Animal unit

Sr. No.	Particulars	2 CB Cows unit (₹)		ait 2 Buffaloes unit (₹)	
		HF	Jersey	Graded Murrah	Surthi, Dharwad
1	Cost of animals- cross bred Jersey/HF	150000	140000	160000	100000
2	Cost of shed for 2 animals @65sqft/animal	26000	26000	26000	26000
3	Recurring Cost- for 1st batch				
i	Insurance @6% on cost of animals	9000	8400	9600	6000
ii	Concentrates for 30 days @	9300	7500	9000	6750

	₹ 25/kg per animal				
iii	Cost of Green fodder	2340	2070	3150	2700
	Cost of Dry fodder	1440	1200	1920	1680
iv	Miscellaneous cost @ ₹ 25/- per day/animal	750	750	750	750
	Total (rounded off)	199000	186000	210000	144000

Ten Animal Dairy Unit

Sr. No.	Particulars	10 CB cows	10 CB cows unit (₹)		oes unit (₹)
		HF	Jersey	Graded Murrah	Surthi, Dharwad
1	Cost of 10 animals – Cross	750000	700000	800000	500000
2	Cost of Shed for 10 animals @65 sq ft/animal	130000	130000	130000	130000
3	Cost of shed for calves@40sqft/animal	120000	120000	120000	120000
4	Cost of borewell	100000	100000	100000	100000
5	Cost of Storeroom, Chaffcutter, Milking machine	102500	102500	102500	102500
6	Recurring Cost- for 1 st batch				
i	Insurance @ 6% on cost of 5 animals	45000	42000	48000	30000
ii	Cost of concentrates	46500	37500	45000	33750
iii	Cost of green fodder	11700	10350	15750	13500
iv	Cost of dry fodder	7200	6000	9600	8400
v	Labour charges	10000	10000	10000	10000
vi	Miscellaneous (Veterinary aid, electricity, Mineral Mixture etc) 59Rs/day	17700	17700	17700	17700
	Total (rounded-off)	1340600	1276050	1398550	1065850

Unit Cost for Dairy- Indigenous Breeds (Gir, Sahiwal and Tharparkar)

Sr. No.	Particulars	2 animal unit (₹)	10 animal unit (₹)
1	Cost of animals	120000	600000
2	Cost of Shed for 10 animals @65 sq ft/animal	26000	130000
3	Cost of shed for calves@40sqft/animal	24000	120000
	Bore well		100000
	Cost of Storeroom, Chaff cutter, Milking machine		102500
4	Recurring Cost- for 1st batch		
i	Insurance @6% on cost of animals	7200	36000
Ii	Cost of concentrates	6000	30000
iii	Cost of green fodder	2070	10350
	Cost of dry fodder	1200	6000
	Labor charges		10000
	Miscellaneous (Veterinary aid, electricity, Mineral Mixture etc.) 40Rs/day	186470	1144850

${\bf Other\ expenditure\ and\ techno-economic\ parameters}$

Particulars	Cost (₹)	Remarks
a. Cattle/buffalo shed (110 to 140 per sq ft)	26000	
1. Shed @ ₹ 200 per sq ft		Cattle shed store room should be
2. AC roof shed @ ₹ 300 per sq ft	39000	an integral part
b. Construction of store room ₹ 250/sq ft		of Dairy scheme and should not
Requirement of storage space		be financed
upto 5 animals- 50 sq ft	12500	separately
6-10 animals -100 sq ft	25000	
11-15 animals- 150 sq ft	37500	
16-20 animals- 200 sq ft	50000	

Particulars	Cost (₹)	Remarks
c. Feed &Fodder Cost Feed: 30 days feed @ ₹ 22 per kg	25	Loans to be recovered along with the loan
Feed requirement will vary depending on yield and breed of animal	5000	disbursed for purchase of animal.
Fodder: ₹ 5000 per animal towards cost of fodder cultivation.		ammai.
e. Cost of milking machine (for 5 to 10 animal unit)	30000-40000	
f. Cost of cross bred milch cows	70000-75000	

Calf-rearing - rearing of female calf (CB Cows)

Sr. No.	Particulars	5 heifer calves Unit (₹)	Remarks
1	Cost of 5 heifer calves - Cross bred Jersey/HF for 5 heifer calves @ ₹ 8000 per animal	40000	Loan to be repaid
2	Cost of equipment - LS	3000	immediately if
3	Cost of shed (40 sq. ft per calf)	40000	sold as breeding animal, otherwise
5	Concentrate feed for 28 months – 1600 kg per calf @ ₹ 25 per kg	200000	GP of 3 years & 3 months.
6	Fodder cultivation cost for 28 months	37440	
7	Cost of breeding medicines, vaccines and Misc. charges	5000	
	Total (rounded-off)	328000	

Male calf rearing

Sr. No	Activity	Unit Cost (₹)	Remarks
1	Male calf rearing (indigenous animals- Deoni, Hallikar, Amrit Mahal) 10 male calves.	381000	GP- 3 years. Entire repayment to be completed by 5th year

Sr. No	Activity	Unit Cost (₹)	Remarks
2	Male calf rearing (indigenous animals- Deoni, Hallikar, Amrit Mahal) 20 male calves.	761000	GP- 3 years. Entire repayment to be completed by 5 th year

Hydroponic unit for Fodder cultivation

Activity	Unit Cost (₹)	Remarks
Hydroponic unit for production of green fodder (for 2 heads of cattle)	60000	5 Year repayment with no GP

This unit may be considered for finance only in areas where there is severe shortage of green fodder & also to be integrated with modern dairy farm.

Fodder Cultivation- Stylo

Activity	Unit Cost per ha (₹)	Remarks
Fodder Cultivation (Stylo)	25000	5 Years with no GP

Special terms and conditions

- 1. The bank shall select villages keeping in view the compactness of the area to facilitate supervision and nearness of villages to veterinary dispensaries, animal breeding centers and milk marketing facilities.
- 2. The bank shall ensure that a unit of 2/3 milch animals is financed and that animals are purchased with an interval of about 4-6 months to ensure continuity in milk production.
- 3. 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.
- 4. (a) Immediately after purchase, suitable arrangements for identification of animals by tattooing or ear tagging shall be made with the help of State Animal Husbandry Department. In addition to this, the record of particulars of the animal identification (color, birth marks etc.) shall be maintained.
- (b) Certificate regarding age, milk production and health of animals financed shall be

obtained from qualified veterinary assistant surgeon.

- 5. Animals should be vaccinated with the help of the Veterinary Department, against diseases such as Lumpy Skin Disease, Brucellosis, *Hemorrhagic Septicemia* and Foot & Mouth disease depending upon prevalence of particular diseases in the area and as per the advice of the State Animal Husbandry Department.
- 6. Adequate insurance cover is to be obtained for all animals purchased under the scheme.
- 7. The bank shall satisfy itself that beneficiaries have adequate arrangements for supply of green/dry fodder and concentrate feed. The bank shall wherever possible, encourage the beneficiary to take up green fodder cultivation on his/her own.
- 8. The bank shall satisfy itself that adequate facilities for veterinary aid and breeding are available from the Government department / Milk Union concerned to the beneficiary in the vicinity of the scheme area.
- 9. In cases, where cross bred / indigenous cows are financed, the bank shall satisfy itself that breeding service, with high quality semen of exotic / cross bred pedigree bulls, is available at the artificial insemination centers in the scheme area.
- 10. Wherever loans for construction of cattle shed are not given, the bank shall ensure, before sanction of loan for purchase of milch animals that the beneficiary either has a cattle shed or facilities to provide shelter or will be able to provide a cattle shed out of his own sources.
- 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 centers 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.

Poultry



AH- Poultry

a. Commercial Layer unit-5000 layers (1+1+4 under Cage system)

Sr. No.	Particulars	Cost (₹)	Remarks			
A	Civil structures	1036826				
В	B Electrical installations @ 4% of civil costs 37024 inc					
С	MI structures	86650	year GP			
D	Equipment	796500				
Е	Working Capital	1055000				
	Grand total (rounded off)	3012000				

b. Commercial broiler unit -1000 birds per batch

Particulars	Unit Cost (₹)	
Commercial broiler unit -1000 birds per batch	312600	

c. Backyard poultry-50 females+ 10 males

Sr. No	Particulars Unit Cost (₹)		Repayment	
1	Land	Self		
2	Night shelter – 6 numbers (6'X6'X2.5' with locally available material) @ ₹ 600 per unit	3600	5 years including 1 year GP	
3	Capitalised expenditure	8335		
	Total Cost(rounded off)	12000		

d. Commercial Broiler Unit under integration -2000 birds (Deep litter system)

Sr. No.	Particulars	Unit Cost (₹)	Repayment
1	Land	Own	
2	Civil Structures - a. Shed for Broilers(1 sq ft per broiler; 2000 broilers; ₹ 150 per sq ft)		
3	Minor Irrigation structures -Overhead tank (2000 l capacity; ₹ 5 per litre)	10000	5 years including 1

Sr. No.	Particulars	Unit Cost (₹)	Repayment
4	Equipment - Broiler equipment (2000 chicks; ₹36.75 per bird)	70000	year GP
5	Working capital* – Rice Husk, Electricity & Miscellaneous	76000	
	Total	456000	

^{*} Other items like chicks, feed, etc. are provided by the integrators and hence not required to be financed.

g. Broiler unit under integration - 5000 birds

Particular	Unit Cost (₹)
Broiler unit under integration - 5000 birds	1140000

h. Poultry marketing outlet

Sr. No.	Particulars	Unit Cost (₹)
1	Poultry Marketing outlet -300 birds per day	1000000

i. Duck rearing unit -200 ducks

Sr. No	Particulars	Unit Cost (₹)	Repayment		
1	Cost of duckling (DoCs) @ ₹ 30 per duckling	6000			
2	Cost of enclosure/shed with open space -500 sq ft @ ₹ 75 per sq ft	3500	5 years including 1		
3					
4	Cost of equipment- feeding, watering	2500			
5	Veterinary Aid @ ₹ 10 per duck	2000			
6	Misc. expenses including insurance- LS	1000			
	Total (Rounding off)	46200			

Special terms and conditions

Poultry Farming (Commercial Layers/Broilers)

- The new poultry farms may be one kilometer away from the existing farms/complexes.
- Farms having more than 50,000 layers should have preferably separate facilities for brooding and growing.
- The bank shall satisfy that the company observes among others the following specifications in designing the poultry sheds.
- The bank shall ensure that the beneficiaries make firm arrangements for getting supply of high quality chicks from a reputed hatchery.
- The bank shall ensure that there are firm arrangements for marketing of eggs/ culled birds.
- The bank shall ensure that periodical check-up of poultry flock by a competent veterinarian, preferably at least once in a month, is carried out.
- A regular vaccination schedule, prescribed by hatchery/competent person, should be followed immediately after purchase of the chicks.
- Periodical debeaking and deworming of birds should be done.
- 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.
- Fresh, clean and dry litter material should be placed on the floor of poultry house in case of deep litter house before the birds are introduced in the shed.
- Fresh and clean water should always be available and waterers are to be cleaned regularly.
- The bank should ensure that firm arrangements are made for getting balanced concentrate feed and its availability to the birds. In case of commercial projects (more than 10,000 birds), bank may advise the borrower to have a feed mixing plant (mixer and grinder) in the project for mixing feed for captive consumption.
- Beneficiary should keep records of feed consumption, mortality, vaccination, egg production, number of birds culled etc.
- The bank should ensure that the sheds and equipment are insured during the period of loan. In lieu of poultry insurance for birds, the banks may consider creation of risk/ mortality fund.

Sheep, Goat, Piggery & Others



AH – Sheep, Goat, Piggery & Others

Sheep Breeding Unit (100+5) Deccani, Hassan, Bellary breeds

(₹)

Particulars	Deccani, Hassan	Bannur
1. Cost of animals		
a. Rams (5 rams)	50000	70000
b. Ewes(100 ewes)	900000	1300000
c. Cost of construction of sheds for Ewes & Rams(10sqft/animal)	105000	105000
d. Cost of construction of sheds for Lambs (o5sqft/animal)	50000	50000
2.Borewell and water supply	100000	100000
3.Miscellaneous (chaff cutter and others)	40000	40000
Fixed cost	1245000	1665000
4. Recurring cost for one year		
a. Feeding for one cycle- rams	9600	9600
b. Feeding for one cycle- ewes	144000	144000
c. Feeding for one cycle- lambs	27000	27000
d. Veterinary aid (@ Rs.30/animal/year)	3150	3150
e. Insurance cost for the adults (@5% cost of adults)	47500	68500
f. Miscellaneous expenditure	5000	5000
g. Labor cost	64000	64000
Recurring cost	300250	321250
Total financial Outlay(rounded off)/Unit Cost	1545250	1986250

Sheep Rearing Units

(₹)

Sr. No.	Particulars	Bannur (10+1)	Local breed (10+1)	Bannur (20+1)	Local breed (20+1)	Remarks
1	Cost of animals:					

Sr. No.	Particulars	Bannur (10+1)	Local breed	Bannur (20+1)	Local breed	Remarks
			(10+1)		(20+1)	
a	Rams	8000	6000	8000	6000	
b	Ewes	60000	50000	120000	100000	(
2	shed / pen	11000	11000	21000	21000	6 years including
	Sub Total	79000	67000	149000	127000	6 months GP
3	Recurring cost for one year					
a	Grazing charges @ ₹ 150 per animal per year	1650	1650	3150	3150	
b	Feeding for one cycle	25295	25295	45990	45990	
c	Veterinary aid (@ ₹ 30 per animal per year)	330	330	630	630	
d	Insurance cost for the adults (@ 5% cost of adults)	4450	3400	8450	6400	
e	Shearing cost (@ ₹ 25 per animal per year)	275	275	525	525	
	Sub Total	32000	30950	58745	56695	
	Total Cost (rounded off)	111000	98000	208000	184000	

Sheep Fattening Units (100)

(₹)

Sr.	Particulars	Deccani, Hassan
No.		·
1	Cost of animals	450000
2	shed / pen	100000
3	Bore-well and water supply	100000
4	Miscellaneous (chaff cutter and others)	37000
	Sub Total	687000
	Recurring cost for one year	
a	Grazing charges @ ₹ 150 per animal	15000
b	Feeding for one cycle	144000
c	Veterinary aid (@ ₹ 30 per animal)	3000
d	Insurance cost for the adults (@ 5% cost of adults)	22500
	Sub total	184500
	Total	871500

Goat Breeding Unit (500+25)

(₹)

Sr. No.	Particulars	Local breed	Improved breed	Remarks
1	Cost of animals:			
a	Buck	162500	200000	
b	Does	2750000	3500000	
2	Transportation charges for animals	42000	42000	
3	Cement shed with asbestos sheets (20 sq. ft per animal @ ₹ 100 per sq ft)	1050000	1050000	
	Sub Total	4004500	4792000	
4	Recurring cost for one year			6 years
a	Grazing charges @ ₹ 120 per animal per year	63000	63000	repayment including 1 year GP
b	Feeding for one cycle- bucks	11250	11250	
c	Feeding for one cycle- does	202500	202500	
d	Feeding for one cycle- kids	25440	25440	
e	Veterinary aid (@ ₹ 30 per animal per year)	15750	15750	
f	Insurance cost for the adults (@ 4% of cost of adults)	116500	148000	

g	Miscellaneous expenditure	1030	5000
h	Labour cost	16000	16000
	Sub Total	451470	486940
		"	

Goat Breeding Unit (100+5)

(₹)

Sr. No.	Particulars	Local breed	Improved breed	Remarks
1	Cost of animals:			
a	Buck	32500	40000	
b	Does	550000	700000	
2	Transportation charges for animals	8400	8400	
3	Cement shed with asbestos sheets (20 sq. ft. per animal @ ₹ 100 per sq. ft.)	210000	210000	
	Sub Total	800900	958400	
4	Recurring cost for one year			6 years
a	Grazing charges @ ₹ 120 per animal per year	12600	12600	repayment including 1 year GP
b	Feeding for one cycle- bucks	2250	2250	
c	Feeding for one cycle- does	40500	40500	
d	Feeding for one cycle- kids	5088	5088	
e	Veterinary aid (@ ₹ 30 per animal per year)	3150	3150	
f	Insurance cost for the adults (@ 4% of cost of adults)	23300	29600	
g	Miscellaneous expenditure	1030	5000	
h	Labour cost	16000	16000	
	Sub Total	103918	114188	
	Total Cost (rounded off)	904818	1072588	

Goat Rearing units

(₹)

Sr. No.	Particulars	Local breed (10+1)	Improve d breed (10+1)	Local breed (20+1)	Improved breed (20+1)	Repayme nt
1	Cost of animals:					
a	Bucks	6000	8000	6000	8000	
b	Does	55000	70000	110000	140000	
2	shed / pen	11000	11000	21000	21000	
	Sub Total	72000	89000	137000	169000	6 years
3	Recurring cost for one year					including 6 months GP
a	Grazing charges @ ₹ 150 per animal per year	1650	1650	3150	3150	
b	Feeding for one cycle	17424	17424	33264	33264	
c	Veterinary aid (@ ₹ 30 per animal per year)	330	330	630	630	
d	Insurance cost for the adults (@ 5% cost of adults)	3350	4450	6325	8400	
	Sub Total	22754	23854	43369	45444	
	Total Cost (rounded off)	94754	112854	180369	214444	

Special terms and conditions- Sheep/Goat

• The bank shall select villages keeping in view the compactness of the area to facilitate supervision, nearness of villages (within 5 to 10 km distance) to veterinary dispensaries, grazing facility and adequate marketing facilities of wool/meat.

- While selecting beneficiaries, preference may be given to persons belonging to traditional shepherd's community having better experience of management of sheep/goat.
- Only sheep/goat of 12 to 18 months old, certified as healthy by a qualified Veterinary Assistant Surgeon of Department of Animal Husbandry, preferably Deccani, Hassan, Bannur breeds of sheep and Osmanabadi / local breeds of goat shall be financed under the scheme.
- All animals financed shall be tattooed or ear tagged for proper identification.
- Arrangements may be made to vaccinate animals purchased against all
 infectious diseases including Enterotoxaemia, Blue Tongue, and Hemorrhagic
 Septicemia as per the advice of Department of Animal Husbandry. Sheep/Goat
 shall be dewormed at least once in three months with the help of State Animal
 Husbandry Department.
- The bank shall ensure that animals are adequately insured.
- The bank shall ensure that no animal is disposed of or sold by the beneficiary, without its prior permission in writing, till the loan is fully repaid.
- Transportation costs extra, on need basis

Pig breeding Unit (20 sows + 2 boars)

Sr. No.	Particulars	Unit Cost (₹)
1	Buildings	
a	Pig styes	
i	Sow @ 20 sq. ft. per sow at ₹ 160 per sq. ft. for 20 sows	64000
ii	Boar @ 70 sq. ft per boar for 2 boars at ₹ 200 per sq. ft.	28000
iii	Farrowing pen at 80 sq. ft per sow for 8 sows at ₹ 160 per sq. ft. (considering always 40% of pigs in farrowing)	
iv	Piglets @ 10 sq ft per piglet for 200 piglets at ₹ 100 per sq. ft	200000
v	Store room 200 sq ft at ₹ 150 per sq. ft	30000
	Sub Total	424400
2	Pigs for breeding	
i	Cost of 20 four month old gilt weighing about 40 kg @ ₹ 80 per kg live weight	90000
ii	Cost of 2 six month old boar weighing about 50 kg @ ₹ 90 per kg	9000
	Sub Total	99000
3	Feed	

Sr. No.	Particulars	Unit Cost (₹)
i	Feed - concentrate feed per adult up to breeding stage - 900 gm concentrate per adult per day for 6 months @ ₹ 27 per kg	96228
ii	Feed - kitchen waste feed per adult up to breeding stage @ ₹ 1 per kg	5670
iii	Feed - concentrate feed per piglet up to marketable stage - 2100 gm kitchen waste per adult per day for 6 months - 525 gm concentrate per piglet per day for 6 months	585900
iv	iv Feed - kitchen waste feed per piglet up to marketable stage- 1225 gm kitchen waste per piglet per day for 6 months	
	Sub Total	731898
4	Equipment	
i	Equipment @ ₹ 200 per adult animal	4400
ii	Equipment @ ₹ 20 per 200 piglets	4000
	Sub Total	8400
5	Medicine and vaccines @ ₹ 100 per animal	2200
6	Insurance charges @ 5% of cost of breeding stock	4550
7	One labour @ ₹ 8000 per month	48000
8	Cost of 3 wheeler for garbage collection	150000
	Total (rounded off)	1468448

Pig rearing cum fattening unit (3 sows +1 boar)

Sr. No.	Particulars	Unit Cost (₹)	Remarks
1	Fixed Cost		
a.	Cost of 3 Sows @ ₹ 5000/- per sow and 1 boar @ ₹ 6000/-(4 to 5 months old)	21000	
b.	Cost of shed -280 sq. ft. @ ₹ 200 per sq. ft.	56000	
c.	Water supply (Bore-well, electric motor pump set 1 HP) & equipment- LS	25000	5 Years including 1
	Sub-Total	102000	year GP
2	Recurring Cost		

a	Insurance @ 6% of cost of animals	1260
b	Cost of feed for 9 months	58428
c	Veterinary aid @ ₹ 200 per animal	800
d	Miscellaneous @ ₹ 500 per animal	2000
	Sub-Total	62488
	Grand Total (Rounded-off)	164488

Techno-economic aspect of feeding for Pigs

- Feed required for adult @ 3kg/day, out of which 40% concentrated feed @ Unit Cost of ₹ 27 per kg, 30% waste @ Unit Cost of ₹ 1 per kg
- Fattener @ 1.75 kg per fattener. Out of which 40% concentrate feed @ Unit Cost of ₹ 27 per kg 30 % waste @ Unit Cost of ₹ 1 per kg

Retail pork outlet with facility for chilling

Sr. No.	Particulars	Unit Cost (₹)
1	Retail pork outlet with facility for chilling	1200000

Others

Rabbit Farming

Sr. No.	Particulars	Unit Cost (₹)
1	Rabbit rearing (10+3)	300000

Integrated Farming Models

Activity*	Total Cost (₹)
Cereal-Maize (1.5 acre)+cowpea (1.5 acre) + farm pond + 2 cows (4LPD/cow)	175000
Cereal-Maize (1.5 acre)+cowpea (1.5 acre) + sheep rearing (20 ewes +1 ram)	193000
Mango (1 acre)+ cows (4 LPD/cow) + Brinjal (1 acre)	150000
Farm pond (various sizes)/Dairy (2 animals)/Sheep & goat (10+1)/poultry (50 Giriraja)/ apiary	Varies with the combination of enterprises

^{*}The Unit Costs may vary depending upon the enterprise proposed in the integrated model.

Fisheries & Storage structures



Chapter 8 – Fisheries

	Fisheries: Inland Aquaculture				
Sr. No.	Activity	Unit Size	Unit cost (₹)		
1	Freshwater fish culture in new ponds- Composite fish culture of Indian major carps viz., Catla, Rohu, Mrigal and other major carps such as Silver carp, grass carp and common carp	1 ha	829000		
2	Freshwater Prawn culture- Macrobrachium rosenbergii	1 ha	535000		
3	Culture of freshwater catfish-Pangasius Sutchi	1 ha	568000		
4	Breeding and rearing of ornamental fishes (small unit)	200-250 sq. ft. area	150000		
5	Biofloc ponds construction with input cost of Rs.4 lakhs*	0.1 ha	1400000		
	Fisheries: Brackish-water/Coas	ı Stal Aquaculture			
Sr. No.	Activity	Unit Size	Unit cost (₹)		
1	Shrimp farming-White leg shrimp- Litopeneus vannamei	1 ha	3510000		
2	Biofloc ponds (Brackish water/Inland saline areas) construction with input cost of Rs.8 lakhs*	0.1 ha	1800000		
3	Bivalve cultivation (mussels, clams, pearl etc.)*	NA	20000		
	Fisheries: Maricult	ture			
Sr. No.	Activity	Unit Size	Unit cost (₹)		
1	Establishment of Open Sea cages (100- 120 cubic meter volume)*	1 No	500000		

Fishing crafts						
Sr. No.	Type of craft	Name of craft	Unit cost (₹)			
1	Non-mechanized fishing craft	Traditional boat	500000			
2	Motorized fishing craft	Traditional boat with outward motor	170000			
3	Mechanized craft	Offshore fishing boat with steel hull-20 m OAL	8322000			

^{*} Details obtained from Pradhan Mantri Matsya Sampada Yojana operational guidelines 2020

Chapter 9- Storage Structures

Onion Storage Structure

Particulars	Unit Cost (per MT) (₹)	Remarks
Onion Storage Structure (25 MT capacity)	7000/-	Proper aeration and ventilation may be provided. Repayment period may be decided by banks based on the economics of the unit

Cost recommended by NHB for Low Cost Onion Storage structures under Integrated Scheme for Horticulture Development.

The following physical provisions with their costs are considered for an onion storage structure.

- Site development including levelling, fencing, drainage, etc.,
- Construction of onion storage shed as per the principles indicated above,
- Provision of wooden beams for the floor and bamboo sticks for sides and floors,
- Provision of poly ethylene sheets/ gunny bags for preventing sunlight or rain falling on onion.

Note: Unit Cost for Godowns & other storage structures will be on project basis

Renewable Sources of Energy



Chapter 10 - Renewable Sources of Energy

Sr. No.	Renewable Source	Particulars	Capital Cost
1	Solar Pump (per HP)	AC/DC surface	Rs.92400/-
		AC/DC Submersible	Rs.1,03,700/-
2	Solar Light	Solar Study Lamp*	Rs.395/- per system
		Solar street Lights (with lithium batteries) **	Rs.19400/- per system
3	Solar PV systems (off-grid)	Up to 10 kW with 6 hrs. battery backup	Rs.94/Wp
		Up to 10 kW with 3 hrs. battery backup	Rs.74/Wp
		Up to 10 kW with 1 hr. battery backup	Rs.62/Wp
		Up to 25 kW with 6 hrs. battery backup	Rs.84/Wp
		Up to 25 kW with 3 hrs. battery backup	Rs.66/Wp
		Up to 25 kW with 1 hr. battery backup	Rs.55/Wp
4	*** Solar Panel rooftop system (Grid connected)	System capacities of >10 kW up to 100 kW	Rs.46/Wp#
		System capacities of >3 kW up to 10 kW	Rs.49/Wp#
		System capacities of >2 kW up to 3 kW	Rs.50/Wp#
		System capacities of >1 kW up to 2 kW	Rs.51.5/ Wp#
		System capacities of up to 1 kW	Rs.56/Wp#

^{*}Includes 2.5 w solar panel, 1 W LED luminaire & 3.2 V - 2000 mAh Li battery

^{**}Includes 75 W solar panel, 12 W LED luminaire & 12.8 V - 30 mAh Li battery

^{***}Includes cost of solar PV panels (with domestic cell and modules), inverter (single/3 phase wherever applicable), balance of system e.g. cable, switches/ circuit breaker/ connectors/ junction box, mounting structure, earthing, lightening arrester, and civil works, installation & commissioning, CMC for 5 years, transportation, insurance, applicable taxes, etc.

Note:

- 1. Unit cost for wind, small hydro, solar grid connected & co-generation varies from region to region & on project basis)
- 2. Unit cost for Solar PV systems (Off-grid) is based on MNRE notification for benchmark costing of Solar PV (off-grid)
- # 3. Unit cost for Solar PV rooftop system (grid connected) is based on MNRE notification for benchmark costing with average revision of cost



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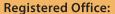
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