### **CONTENTS**

No	Sector	Page
Chapter 1	Water Resources	1
Chapter 2	Land Development	6
Chapter 3	Farm Mechanisation	10
Chapter 4	Plantation & Horticulture	13
Chapter 5	Sericulture	23
Chapter 6	Forestry	26
	AH- Dairy	28
Chapter 7	AH- Poultry	34
· · · · · ·	Ah- Sheep, Goat, Piggery and Others	38
Chapter 8	Fisheries	45
Chapter 9	Storage Structures	45
Chapter 10	Renewable sources of energy	47
Chapter 11	Agro processing	47

## **Water Resources**





Clockwise: Farm Pond & drip irrigation in Ramanagara

### **Chapter 1- Water Resources**

Sl. No	Particulars	Unit Cost (₹) Per ha	Repayment/Remarks
1	Bore well (BW) a) 152 mm dia. and depth 200 m b) 152 mm dia. and depth 300 m	144000 227000	11 to 15 years with 11 months gestation period (GP)
2	Pump sets	As per prevailing market rates	
3	Renovation/ Deepening of Wells	33000	5 years including 11 months GP
4	Pump house with A.C Roof $(2m \times 2m \times 2.1m) \rightarrow 3 \text{ HP}$ $(2.5m \times 2.5m \times 2.1m) \rightarrow 5$ HP $(2.7m \times 2.7m \times 2.4m) \rightarrow 10$ HP	22000 34000 42900	
5	Storage tank (3.5 m x3.5 m x2.5m)	40000	9 years' including 11 months GP
6	Pipeline distribution systems for Well Commands	24000	
7	Small lift irrigation schemes (command area: 10 - 40 ha)	66000	7 to 9 years including 11 months GP
8	Rain water harvesting-cum- artificial recharge structures for bore wells	51000	5 years with 1 year GP
9	Sub-surface Drainage System – Tile Drain Pipe	160000	7 Years including 1-year GP
10	Sub-surface Drainage System – HDPE Drain Pipe	198000	
11	Dug wells	47000 - 930000	Cost varies depending on rock formation and depth. 11 to 15 years repayment including 23 months GP

### **Drip Irrigation system based on spacing norms**

No	Spacing (m)	Unit Cost per ha (₹)	Repayment
i	12 X 12	26000	
ii	10 X 10	29000	11-15 years depending on the
iii	9 x 9	31000	age of crop/plantation with
iv	8 x 8	36000	adequate GP
V	6 x 6	42000	-
vi	5 x 5	42000	

No	Spacing (m)	Unit Cost per ha (₹)	Repayment
vii	4 X 4	48000	
viii	3 x 3	60000	
ix	2.50 x 2.50	65000	
X	2 X 2	71000	
xi	1.20 x 1.20	77000	
xii	0.90 x 0.90	114000	
xiii	0.60 x 0.60	135000	
xiv	2.50 x 0.60	76000	
XV	1.80 x 0.60	98000	
xvi	1.20 x 0.60	132000	

#### **Sprinkler Irrigation systems**

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

#### Special terms and conditions

- 1. 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 programme.
- 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: 10804-1994 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 10804-1994, 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 10804-1994.
  - 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:

```
Below 3 HP - 1 kvar
3 HP to 5 HP - 2 kvar
5 HP to 7.5 HP - 3 kvar
```

#### 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.

#### 12. 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.
- 13. Bankers are advised to sanction borewells, ideally in combination with water conservation mechanisms such as drip irrigation and energy efficient pumps.

# **Land Development**



Clockwise: Vermicompost pit in Ramanagara , Stone Gully Plug in Mandya district

# **Chapter 2- Land Development Contour Bunding**

Sl. No.	Slope	Per ha length	No. of stone outlets required	Unit Cost per ha (₹)	Repayment
1	2%	200	2	12800	
2	3%	222	3	15700	
3	4%	250	3	16900	5 – 7 years with 1-year GP
4	5%	333	4	22500	1-year Gr
5	6%	400	4	25400	

### On Farm Development (OFD) Works

Sl. 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**

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

### **Composting & Vermicompost Unit**

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

(1.27 cu.m)	

<sup>\*</sup>Unit Cost varies depending on the type of land and the number of tanks.

### **Gully Plugs**

Sl. 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 with 1 year
3	Earthen Gully Plugs (EGP)	6 m	-do-	1500	GP

### Other activities

Sl. No.	Activity	Unit Cost per ha (₹)	Repayment
1	Tank silt application	24800	
2	Reclamation of alkali soils	30000 - 35000	3 year with 1 year GP
3	Plastic mulching	24000 - 32000	
4	Fencing (Barbed wire with stone posts/cement pillars)	175/m	Repayment is depending on the crop

### Azolla & Vermi hatchery & Vermicompost

No	Activity	Unit Cost (₹)	Repayment
1	Azolla (1 TPA- 2 pits)	156000	5 years with one year GP
2	Vermi hatchery (320 TPA)	438000	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**



 ${\it Clockwise: Sweep\ cultivator\ \&\ tractor\ in\ Chikkaballapur}$ 

### **Chapter 3 - Farm Mechanisation**

Sl. No.	Machinery / Implement	Unit Cost (₹)	Repayment		
1	Tractor with accessories - 15 to 25 HP	2.50 - 4.50 lakh			
2	25 to 35 HP	4.50 - 5.50 lakh			
3	35 to 45 HP	5.00 - 7.50 lakh	7 to 9 years with 1		
4	45 to 55 HP 6.50 - 8.50 lakh		year GP		
5	55 to 60 HP	7.50 - 9.50 lakh			
6	Trolley – two wheel hydraulic	1.00 - 1.50 lakh			
7	Power tiller 6 to 12 HP	0.60 - 2.00 lakh	5 – 7 years with 1 year GP		
8	Seed cum fertilizer Drill	35000 – 60000	5 – 7 years with 1 year GP		
9	Paddy Transplanter (4, 6 & 8 rows)	1.5- 3 lakh	5 – 7 years with 1 year GP		
10	Cono Weeder/Rotary Weeder	1000-3000	3 – 5 years		
11	M. B. Plough (2 / 3 furrows)	0.15 - 0.40 lakh			
12	Reversible M. B. Plough (2 / 3 furrows)	0.15 - 1.00 lakh			
13	Disc Plough (2 / 3 discs)	0.40 - 0.60 lakh	Tractor with minimum 2-3		
14	Disc Harrow	0.40 - 0.60 lakh	implements are requires to be		
15	Cultivator	0.15 - 0.30 lakh	purchased		
16	Rotavator (540 and 1000 rpm PTO speed)	0.65 - 1.00 lakh			
17	Thresher	0.45 - 2.00 lakh			
18	Bullock Drawn MB Plough	0.15 - 0.20 lakh			
19	Groundnut decorticator- hand operated	Rs.9000-11000			
20	Groundnut decorticator	0.50-1.50 lakh			
21	Arecanut climbing machine	Rs.6500-8000			
22	Combine Harvesters	As per make / HP	7 - 9 years		

### **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 1 year GP
Seed cum fertilize drill	on the combination, capacity, make etc.	
Laser Guided Land Leveler		
Thresher		
Sprayer		
Shed and office premises		
Servicing tools		

### **Special Terms and Conditions - 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.



Clockwise: Jackfruit in Mandya , Sapota in Ramnagara, Cashew Plantations in Dakshin Kannada

Sl.	Crop	Spacing	Popul ation/			Yea	r			Unit Cost per acre	- Repayment
No ·	323 <b>F</b>	ST	acre	I	п	III	IV	$\mathbf{v}$	VI		
1	Citrus	6x6m	110/ac re	27,144	9,759	8,230	10,858	11,265		67000	12 years including 7 years GP
2	Grape- Seedless varieties	3m x 1.8m	740	289080	1,69,520					458600	7 years including 2 years GP
3	Grape- Bangalore Blue	3.3m x 3.3m	360	2,24,140	1,25,360					350000	7 years including 2 years GP
4	Mango	9m x 9m	50	50,000	15,000	10,000	10000	7000		92000	10 years including 5 years GP

Sl.	Crop	Crop Spacing Popu ation acre				Yea		Unit Cost per acre (₹)	Repayment		
No ·	СГОР	Spacing		I	п	III	IV	v	VI		
5	Pomegranate	3.5m x 3.5m	326	1,06,00	82,340					190000	9 years including 3 years GP
6	Sapota	9m x 9m	50	31,900	8,800	10,800	11,600	12,100		75000	10 years including 5 years GP
7	Guava	8m x 8m	60	40,000	15,000	15,000	10,000			75000	11 years including 7 years GP
8	Guava (High Density)	2.5m x 2.5m	640	80000	27000	23000	15000			145000	
9	Custard Apple	2.5 m x 5 m	320	70460	13680	12560				97000	7 years including 5 years GP

Sl.	Сгор	Popul ation/			Yea	r			Unit Cost per acre (₹)	Repayment	
No ·	СГОР	Spacing	acre	I	п	III	IV	v	VI		
10	Drum stick	3.5m x 3.5m	326	24000	15000					39000	5 years including 2 years GP
11	Mango( High Density Planning)	5m x 5m	160	53835	19151	27676	34152	40438		175000	10 years including 5 years GP
12	Ber	5 m x 5m	160	25000	15000	6000				46000	11 years including 7 years GP
13	Dragon fruit	2.5 m x 2.5 m	400 poles	625900	35600					662000	4 years including 5 years GP
14	Aonla	6m x 6m	110	18546	7836	7031	6541			41000	10 years including 6 years GP

Sl.	Crop Spacing Po					Yea	Unit Cost per acre (₹)	Repayment			
No ·	СГОР	Spuemg	acre	I	п	III	IV	v	VI		
15	Jamun	8m x 8m	62	35000	20000	10000				65000	7 years including 4 years GP
16	Papaya	3m x 3m	444	55000	20000	17000				92000	5 years including 2 years GP
17	Jackfruit	10m x 10m	40	25000	10000	5000				40000	11 years including 2 years GP

### **Plantation Crops**

						Ye	ear			Unit Cost (₹)	Repayment
No	Сгор	Spacing	Population /acre	I	II	III	IV	v	VI		
1	Coconut	8m x 8m	60	33700	9700	7600	10100	11600	13600	86500	12 years including 7 years GP
2	Oil Palm	9m x 9m	50	28850	17375	23000	22900			92000	12 years including 5 years GP
3	Coffee (Robusta)	3m x 3m	444	43000	28000	15000	22000			108000	11 years including 5 years GP
4	Coffee (Arabica)	1.5 m x 1.5m	1780	51000	22000	32000	31000			136000	12 years including 5 years GP
5	Cashew	7m x 7m	81	33740	11984	10000	13000	16000		85000	10 years 6 years GP

### **Spices**

Sl. No	Стор	Spacing	Population/acre	Repayment	Unit Cost (₹)
	Pepper (intercrop with Arecanut)	3m x 3m	444	8 years including 4 years GP	105000
	Pepper (intercrop with Coffee)	6m x 6m	111	8 years including 4 years GP	66000
3	Cardamom	1.8m x 1.8m	1230	8 years including 3 years GP	140000
4	Curry leaf	3m x 1.5m	880	7 years including 3years GP	32000

### Floriculture

Sl. No	Crop	Spacing	Population			Year				Unit Cost Repayment	Renavment
51. 110	Стор	Spacing	Topulation	I	II	III	IV	v	VI	(₹)	Kepayment
1	Jasmine	1.5 m x 1.5 m	1780	71384	28574	29174				71000	4 years including 1 year GP

Sl. No	Crop	Spacing	Population	Year Unit				Unit Cost	Danaymant		
51. 110	Стор	Spacing	1 opulation	I	II	III	IV	V	VI	(₹)	Repayment
2	Rose	0.75 m x 0.75 m	7100	127900	20100					148000	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.	. m)			
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

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

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

Sl.	Particulars	Unit	Quantity	Unit	Total	Remarks
No.				price	Cost <b>(₹)</b>	
				(₹)		
Ι	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 capitalized		3	60100	180300	GP
	(40 days)					
	Total cost (I				1637000	
	(a+b+c)+II)					

**Note:** Components in Chawki Rearing Centre & Mulberry cultivation can be financed individually or in combination also.

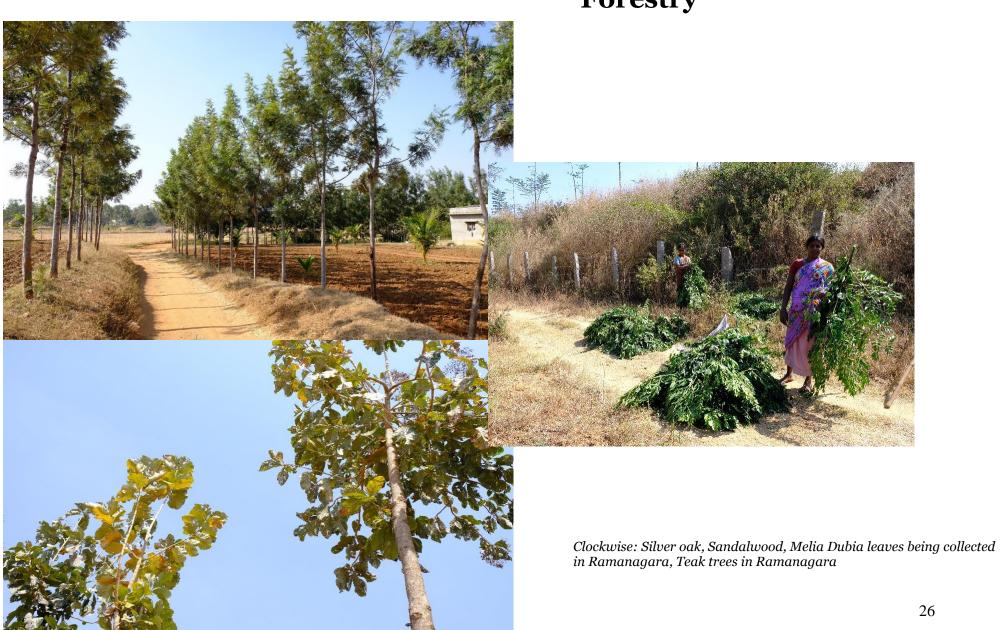
#### Special terms and conditions

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

- 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 silk worm 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**

Sl.			Donulation		Ye	ar		Total	
No.	Crop	Spacing	Population per ha	I	II	III	IV	Cost (₹)	Repayment
1	Sandalwood	10' X 10'	1080	64884	21910	21085	8121	116000	12 years including 11 years GP
2	Melia dubia	3 m x 3 m	1111	56509	24554	24054	5983	111100	7 years including 6 years GP
3	Bamboo	5 m x 5m	400	35870	16070	9660	ı	61600	8 years including 5 years GP
4	Bamboo Tissue Culture	5 m x 5m	400	43870	16870	9260	1	70000	8 years including 5 years GP
5	Teak	2 m x 2m	2500	92925	21250	11825	ı	126000	13 years including 7 years GP
6	Mahogany	4.57 m x 4.57m	478	43254	18504	18504	4738	85000	10 years including 9 years GP
7	Silver Oak	3 m x 3m	1111	55120	24554	24054	6272	110000	7 years including 6 years GP

- Forest Department suggests that sandalwood/ teak cultivation should be grown preferably along with the Agriculture/Horticulture crops as these species have longer rotation period compared to other fast-growing species.
- In case of Sandalwood plantation, protection cost of plantation after the 10<sup>th</sup> 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. 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



Clockwise: Gir cow in Dharwad, Milking Machines in Bangalore Rural & Khillari Cows in Dharwad,

### **Chapter 7 – Animal Husbandry**

### 1. AH – Dairy

### Dairy – One animal unit

A. Cross bred Cows (CB Cows)	Unit Cost	Repayment
	(₹)	
Jersey or HF Crosses - 10 to 12 lpd	62000	
B. She buffaloes		
Graded Murrah/Surti/Dharwad/Pandapuri/	60000	
Mehsani yielding - 9 to 10 lpd		5 years'
C. Indigenous cows		including 6
Malnad gidda (yield 0.8 to 1 lpd)	13000	months GP
Hallikar/Amrit Mahal	25000	
Deoni	32000	
Gir, Sahiwal, Tharparkear	45000	

### Dairy- Two Animal unit

Sl.	Particulars	2 CB Cows	2 Buffaloes
No.		unit (₹)	unit (₹)
1	Cost of animals- cross bred Jersey/HF	124000	120000
2	Transportation of animals@ ₹ 2000/-	4000	4000
	animal		
3	Recurring Cost- for 1st batch		
i	Insurance @5% on cost of animals	3000	2900
Ii	Feed for 30 days @ ₹ 22/- for 120 kg per	2640	2640
	animal		
Iii	Fodder cultivation for 1 animal @₹	5000	5000
	5000/- per animal		
iv	Miscellaneous cost @ ₹ 20/- per	600	600
	day/animal		
	Total (rounded off)	139000	135000

### **Ten Animal Dairy Unit**

Sl.	Particulars	10 CB cows	10 Buffaloes
No.		unit (₹)	unit (₹)
1	Cost of 10 animals – Cross bred	620000	600000
	Jersery/HF		
2	Cost of Shed for 10 animals @65 sq	65000	65000
	ft/animal@ ₹ 100/-sq ft.		
3	Transportation of animals@ ₹ 8000/-	20000	20000
	animal		
4	Recurring Cost- for 1st batch		
i	Insurance @ 5% on cost of 5 animals	15500	15000
Ii	Fodder cultivation for 5 animals @ ₹	25000	25000
	5000/- per animal		

	Total (rounded-off)	759000	738000
	animal for 5 animals		
iii	Feed for 30 days @ ₹ 22/- 120 kg per	13200	13200

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

Sl.	Particulars	2 animal unit	10 animal unit
No.		(₹)	(₹)
1	Cost of animals- cross bred Jersey/HF	120000	600000
2	Transportation of animals@ ₹ 8000/-	16000	80000
	animal		
3	Cost of Shed for 10 animals @65 sq	0	65000
	ft/animal@ ₹ 100/-sq ft		
4	Recurring Cost- for 1st batch		
i	Insurance @5% on cost of animals	3000	15000
Ii	Feed for 30 days @ ₹ 22/- for 120 kg per	1980	9900
	animal		
iii	Fodder cultivation for 1 animal @ ₹	1250	11250
	5000/- per animal		
	Total (rounded off)	142000	781000

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

Particulars	Cost (₹)	Remarks
a. Cattle/buffalo shed (110 to 140 per sq ft)	18200	
1.Thatched shed @ ₹ 140 per sq ft		Cattle shed store
2. AC roof shed @ ₹ 250 per sq ft	32500	room should be
b. Construction of store room ₹ 250/sq ft		an integral part
Requirement of storage space		of Dairy scheme
upto 5 animals- 50 sq ft	12500	and should not
6-10 animals -100 sq ft	25000	be financed
11-15 animals- 150 sq ft	37500	separately
16-20 animals- 200 sq ft	50000	
c. Feed &Fodder Cost	22	Loans to be
Feed: 30 days feed @ ₹ 22 per kg		recovered along
Feed requirement will vary depending on yield		with the loan
and breed of animal	5000	disbursed for
Fodder: ₹ 5000 per animal towards cost of		purchase of
fodder cultivation.		animal.
d. Transportation cost of animals	2000	
e. Cost of milking machine (for 5 to 10 animal	40000-60000	Milking machine
unit)		may be integral
		part of Dairy
		scheme and also
		may be financed
		separately to
		enable
		automation in
		the farm.

Particulars	Cost (₹)	Remarks
f. Cost of cross bred milch cows	6200 per litre of milk yield	

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

Sl. No.	Particulars	5 heifer calves Unit (₹)	Remarks
1	Cost of 5 heifer calves - Cross bred Jersey/HF for 5 heifer calves @ ₹ 5000 per animal	25000	Loan to be repaid
2	Cost of equipment - LS	3000	immediately if
3	Cost of shed (40 sq. ft per calf)	22000	sold as breeding animal, otherwise
4	Transportation including transit insurance @ ₹ 500 per animal	2500	GP of 3 years & 3 months.
5	Concentrate feed for 28 months – 1600 kg per calf @ ₹ 22 per kg	176000	
6	Fodder cultivation cost for 28 months	37440	
7	Cost of breeding medicines, vaccines and Misc. charges	5000	
	Total ( rounded-off)	271000	

### Male calf rearing

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
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)	22000	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 (colour, 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 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.
- 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 organised 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 organised system, the bank may make arrangements with the milk collection agencies for loan recoveries out of sale proceeds.

# Poultry



Clockwise: A poultry farm in Tumkur, high tech poultry farm in Bangalore Rural, Giriraja Chicken in Mandya

### 2. AH- Poultry

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

Sl.	Particulars	Cost (₹)	Remarks
No.			
Α	Civil structures	1036826	
В	Electrical installations @ 4% of civil costs	37024	5 years
C	MI structures	86250	including 1
D	Equipment	796500	year GP
E	Working Capital	1055000	
	Grand total (rounded off)	3012000	

### b. Commercial Broiler unit - 500 birds (Deep litter system)

Sl. No.	Particulars	Unit Cost (₹)	Remarks
1	Land	Own	
2	Civil Structures -	65000	
3	Electrical installations	2600	5 years including 1
4	Broiler equipment (500 chicks; ₹ 35 per bird)	17500	year GP
5	Working capital -	64900	jour or
	Total Cost	150000	

### c. Commercial Broiler unit -500 birds per week (Deep litter system)

Sl. No.	Particulars	Unit Cost (₹)	Remarks
1	Land	Own	
2	Land Development-levelling(0.51 ha) & fencing	38704	
3	Civil Structures -	475000	E Moore
4	Electrical installations	19000	5 years including 1
5	Minor Irrigation structures -	125000	year GP
6	Broiler equipment (4000 chicks; ₹ 35 per bird)	140000	
7	Working capital -	325050	
	Total	1123000	

### d. Commercial broiler unit -1000 birds per batch

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

### e. Backyard poultry-50 females+ 10 males

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

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

Sl.	Particulars	Unit	Repayment
No.		Cost (₹)	
1	Land	Own	
2	Civil Structures - a. Shed for Broilers(1 sq ft per broiler; 2000 broilers; ₹ 130 per sq ft)	260000	
3	Minor Irrigation structures -Overhead tank (2000 l capacity; ₹ 5 per litre)	10000	5 years including 1
4	Equipment - Broiler equipment (2000 chicks; ₹35 per bird)	70000	year GP
5	Working capital* – Rice Husk,Electricity & Miscellaneous	7000	
	Total	347000	

<sup>\*</sup> 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	909000

#### h. Poultry marketing outlet

Sl. No.	Particulars	Unit Cost (₹)
1	Poultry Marketing outlet -300 birds per day	700000

#### i. Duck rearing unit -200 ducks

Sl.	Particulars	<b>Unit Cost</b>	Repayment
No		(₹)	
1	Cost of duckling (DoCs) @ ₹ 30 per duckling	6000	
2	Cost of enclosure/shed with open space -500 sq ft	3500	
	@ ₹ 75 per sq ft		5 years
3	Cost of feed upto 8 weeks – 150 gm per day - 6.5	31200	including 1
	kg per bird @ ₹ 24 per kg		year GP
4	Cost of equipment- feeding, watering	2500	
5	Veterinary Aid @ ₹ 10 per duck	2000	

6	Misc. expenses including insurance- LS	1000	
	Total (Rounding off)	46000	

#### 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 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)**

(₹)

1. Cost of animals	
a. Rams (₹8000 per animal; 5 rams)	40000
b. Ewes (₹7000 per animal; 100 ewes)	700000
2. Transportation charges for animals	8400
3. cement shed with asbestos sheets (20sq ft per animal @Rs 100 per sq ft)	210000
Fixed cost	958400
4. Recurring cost for one year	
a. grazing charges @ Rs 120 per animal per year	12600
b. Feeding for one cycle- rams	2250
c. Feeding for one cycle- ewes	40500
d. Feeding for one cycle- lambs	5100
c. Veterinary aid (@ Rs 30/animal/year)	3150
d. Insurance cost for the adults (@4% cost of adults)	29600
e. Shearing cost (@ Rs 2 per animal per year)	2625
f. Miscellaneous expenditure	5000
g. Labor cost	16000
Recurring cost	116825
Total financial Outlay(rounded off )/Unit Cost	1075000

## **Sheep Rearing Units**

(₹)

Sl. No.	Particulars	Bannur (10+1)	Local breed (10+1)	Bannur (20+1)	Local breed (20+1)	Remarks
1	Cost of animals:		, ,		, ,	
a	Rams	7000	8000	7000	8000	
b	Ewes	60000	70000	120000	140000	
2	Transportation charges for animals	2000	2000	3000	3000	6 years including 6
3	Thatched shed / pen	5000	5000	5000	5000	months GP
	Sub Total	74000	85000	135000	156000	
4	Recurring cost for one year					
a	Grazing charges @ ₹ 150 per animal per year	1650	1650	3150	3150	
b	Feeding for one cycle	0	4830	0	9420	

Sl. No.	Particulars	Bannur (10+1)	Local breed (10+1)	Bannur (20+1)	Local breed (20+1)	Remarks
c	Veterinary aid (@ ₹ 30 per animal per year)	330	330	630	630	
d	Insurance cost for the adults (@ 4% cost of adults)	2680	3120	5080	5920	
e	Shearing cost (@ ₹ 25 per animal per year)	275	275	525	525	
	Sub Total	4935	10205	9385	19645	
	Total Cost (rounded off)	79000	95000	144000	175000	

## Goat Breeding Unit (500+25)

(₹)

Sl.	Particulars	Local breed	Improved	(₹) <b>Remarks</b>
No.	1 articulars	Local bi ccu	breed	Kemarks
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			
a	Grazing charges @ ₹ 120 per animal per year	63000	63000	6 years repayment
b	Feeding for one cycle- bucks	11250	11250	including 1
c	Feeding for one cycle- does	202500	202500	year GP
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	
	Total Cost ( rounded off )	4456000	5279000	

# **Goat Rearing units**

(₹)

Sl. No.	Particulars	Local breed (10+1)	Improved breed (10+1)	Local breed (20+1)	Improved breed (20+1)	Repayme nt
1	Cost of					
	animals:					

a	Bucks	6500	8000	6500	8000	
b	Does	60000	70000	120000	140000	
2	Transportation charges for animals	2000	2000	3000	3000	6 years including 6
3	Thatched shed / pen	5000	5000	5000	5000	months GP
	Sub Total	73500	85000	134500	156000	
4	Recurring cost for one year					
a	Grazing charges @ ₹ 150 per animal per year	1650	1650	3150	3150	
b	Feeding for one cycle	0	4830	0	9420	
c	Veterinary aid (@₹ 30 per animal per year)	330	330	630	630	
d	Insurance cost for the adults (@ 4% cost of adults)	2660	3120	5060	5920	
	Sub Total	4640	9447	8840	19120	
	Total Cost (rounded off)	78000	95000	143300	175000	

#### 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 shepherds' 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 Nellore/Bellary 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, 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.

#### **Unit Cost 2021-22**

- 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.
- Transportation costs extra, on need basis

## Pig breeding Unit (20 sows + 2 boars)

Sl. No.	Particulars	Unit Cost (₹)
1	Buildings	1
A	Pig styes	
i	Sow @ 20 sq. ft per sow at ₹ 140 per sq. ft for 20 sows	56000
ii	Boar @ 70 sq. ft per boar for 2 boars at ₹ 160 per sq. ft	22400
iii	Farrowing pen at 80 sq. ft per sow for 8 sows at ₹ 140 per sq. ft (considering always 40% of pigs in farrowing)	89600
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	398000
2	Piglets 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	10000
	Sub Total	100000
3	Feed	
<u>3</u> i	Feed - concentrate feed per adult up to breeding stage - 900 gm concentrate per adult per day for 6 months @ ₹ 14 per kg	49896
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	352800
iv		
	Sub Total	467166
4	Equipment	
4 i	Equipment @ ₹ 200 per adult animal	4400
ii	Equipment @ ₹ 20 per 300 piglets	6000
	Sub Total	10400
5	Medicine and vaccines @ ₹ 100 per animal	2200
6	Insurance charges @ 5% of cost of breeding stock	5000
7	One labour @ ₹ 5000 per month	60000
8	Cost of 3 wheeler for garbage collection	150000
	Total (rounded off)	1193000

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

Sl.	Particulars	Unit Cost (₹)	Remarks
No.			
1	Fixed Cost		
a.	Cost of 3 Sows @ ₹ 5000/- per sow and 1 boar @ ₹	21000	
	6000/-( 4 to 5 months old)		
b.	Cost of shed -280 sq. ft @ ₹ 150 per sq. ft	44800	
c.	Water supply ( Borewell, electric motor pumpset 1	10000	
	HP) & equipment- LS		5 Years
	Sub-Total	75800	including 1
2	Recurring Cost		year GP
a	Insurance @ 6% of cost of animals	1020	
b	Cost of feed for 9 months	49119	
c	Veterinary aid @ ₹ 200 per animal	800	
d	Miscellaneous @ ₹ 500 per animal	2000	
	Sub-Total	52939	
	Grand Total ( Rounded-off)	129000	

#### Techno-economic aspect of feeding for Pigs

- Feed required for adult @ 3kg/day, out of which 30% concentrated feed @ Unit Cost of ₹ 22 per kg, 70% waste @ Unit Cost of ₹ 1 per kg
- Fattener @ 1.75 kg per fattener. Out of which 30% concentrate feed @ Unit Cost of ₹ 22 per kg 70 % waste @ Unit Cost of ₹ 1 per kg

#### Retail pork outlet with facility for chilling

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

#### **Others**

#### **Rabbit Farming**

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

### Unit Cost 2021-22

## **Integrated Farming Models**

Activity*	Total Cost (₹)
Cereal-Maize (1.5 acre)+cowpea (1.5 acre) + farm pond + 2 cows (4LPD/cow)	144000
Cereal-Maize (1.5 acre)+cowpea (1.5 acre) + sheep rearing (20 ewes +1 ram)	168000
Mango (1 acre)+ cows (4 LPD/cow) + Brinjal (1 acre)	130000
Farm pond (various sizes)/Dairy (2 animals)/Sheep & goat (10+1)/poultry (50 Giriraja)/ apiary	Varies with the combination of enterprises

<sup>\*</sup>The Unit Costs may vary depending upon the enterprise proposed in the integrated model.

# Fisheries & Storage structures



Clockwise: A mechanized boat under construction in Udupi, Storage godown in Mandya, Prawn farming in Udupi

#### **Unit Cost 2021-22**

#### **Chapter 8 – Fisheries**

Sl.	Activity	Unit Cost (₹)
No.		
1	Fresh water fish culture in new ponds (1 ha) – Indian	829000
	Major Carps namely Catla, Rohu, Mrigal and other carps	
	like Silver, Grass & Common carps	
2	Fresh water prawn culture (1 ha) - Macrobrachium	535000
	rosenbergii	
3	Culture of freshwater cat fish - Pangasius sutchi	568000
4	Breeding and rearing of ornamental fishes (small unit)	150000
5	Brackish water shrimp farming- white leg shrimp	3510000
	Litopenaeus vannamei	
6	Non mechanized fishing boat - Traditional boats	500000
7	Motorisation - Traditional boat with Outboard Motor	170000
8	Off shore fishing boat with steel hull - 20 meter OAL	8322000

#### **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 & Agro processing





Solar power generation in Ramanagara, the daily catch getting sorted for processing at Malpe fishing harbor in Udupi.

**Chapter 10 - Renewable Sources of Energy** 

No	Renewable Source	Particulars	Capital cost (₹)
_	Solar Pump (per HP)	AC/DC Surface	₹ 92,400
1		AC/DC Submersible	₹ 1,03,700
2	Solar Light	Solar Study lamp*	₹ 395 per system
_		Solar Street Lights( with Lithium Batteries)#	₹ 19,400 per system

<sup>\*</sup>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 Ah Li battery.

Note: Unit Costs for wind, small hydro, solar grid connected & cogeneration vary from region to region & on project basis.

#### **Chapter 11: Agro Processing**

(₹)

Sl. No.	Equipment	Specification	Cost per Unit*	Remarks
1	Mini Dal Mill	0.5 to 2 ton / hour	0.75 - 2.5 lakh	5-7 years including 1 year GP
2	Rice Mill Composite Unit	10 – 20 ton /day	10 lakh	7-9 years including 1 year GP
2	Mini Rice Mill	70 kg / hour	1.50 - 3.00 lakh	5-7 years including 1 year GP
3	Rice Huller Machine	Max. capacity 50 - 110 kg	20000	3-5 years including 1 year GP
4	Coconut Deshelling Machine	200 to 500 nuts / hour	60000 - 1.00 Lakh	-do-
5	Reefer Van	9 MT Capacity (Assuming 3 cu.m of Chamber Volume= 1 MT of storage Capacity)	26 Lakh	7-9 years including 1 year GP

<sup>\*</sup>The proposed Unit Cost is only for the machinery & does not include available subsidy component. Banks may ensure convergence of credit with ongoing subsidy schemes available for agro processing activities.