

PREPARATION OF A DAIRY FARM PROJECT PROPOSAL

1. Why do Dairy Farming ?

1.1 Dairying is an important source of subsidiary income to small/marginal farmers and agricultural labourers. The manure from animals provides a good source of organic matter for improving soil fertility and crop yields. The gobar gas from the dung is used as fuel for domestic purposes as also for running engines for drawing water from well. The surplus fodder and agricultural by-products are gainfully utilised for feeding the animals. Almost all draught power for farm operations and transportation is supplied by bullocks. Since agriculture is mostly seasonal, there is a possibility of finding employment throughout the year for many persons through dairy farming. Thus, dairy also provides employment throughout the year. The main beneficiaries of dairy programmes are small/marginal farmers and landless labourers. A farmer can earn a gross surplus of about Rs. 12,000 per year from a unit consisting of 2 milking buffaloes. The capital investment required for purchase of 2 buffaloes is Rs. 18,223/-. Even after paying a sum of Rs. 4294/- per annum towards repayment of the loan and interest the farmer can earn a net surplus of Rs. 6000 - 9000/- approximately per year. (For details see model scheme enclosed). Even more profits can be earned depending upon the breed of animal, managerial skills and marketing potential.

1.2 According to World Bank estimates about 75 per cent of India's 940 million people are in 5.87 million villages, cultivating over 145 million hectares of cropland. Average farm size is about 1.66 hectares. Among 70 million rural households, 42 per cent operate upto 2 hectares and 37 per cent are landless households. These landless and small farmers have in their possession 53 per cent of the animals and produce 51 per cent of the milk. Thus, small/marginal farmers and land less agricultural labourers play a very important role in milk production of the country. Dairy farming can also be taken up as a main occupation around big urban centres where the demand for milk is high.

2. Scope for Dairy Farming and its National Importance.

2.1 The total milk production in the country for the year 2001-02 was estimated at 84.6 million metric tonnes. At this production, the per capita availability was to be 226 grams per day against the minimum requirement of 250 grams per day as recommended by ICMR. Thus, there is a tremendous scope/potential for increasing the milk production. The population of breeding cows and buffaloes in milk over 3 years of age was 62.6 million and 42.4 million, respectively (1992 census)

2.2 Central and State Governments are giving considerable financial assistance for creating infrastructure facilities for milk production. The ninth plan outlay on Animal Husbandry and Dairying was Rs. 2345 crores.

3. Financial Assistance Available from Banks/NABARD for Dairy Farming.

3.1 NABARD is an apex institution for all matters relating to policy, planning and operation in the field of agricultural credit. It serves as an apex refinancing agency for the institutions providing investment and production credit. It promotes development through formulation and appraisal of projects through a well organised Technical Services Department at the Head Office and Technical Cells at each of the Regional Offices.

3.2 Loan from banks with refinance facility from NABARD is available for starting dairy farming. For obtaining bank loan, the farmers should apply to the nearest branch of a commercial or co-operative Bank in their area in the prescribed application form which is available in the branches of financing banks. The Technical Officer attached to or the Manager of the bank can help/give guidance to the farmers in preparing the project report to obtain bank loan.

3.3 For dairy schemes with very large outlays, detailed reports will have to be prepared. The items of finance would include capital asset items such as purchase of milch animals, construction of sheds, purchase of equipments etc. The feeding cost during the initial period of one/two months is capitalised and given as term loan. Facilities such as cost of land development, fencing, digging of well, commissioning of diesel engine/pumpset, electricity connections, essential servants' quarters, godown, transport vehicle, milk processing facilities etc. can be considered for loan. Cost of land is not considered for loan. However, if land is purchased for setting up a dairy farm, its cost can be treated as party's margin upto 10% of the total cost of project.

4. Scheme Formulation for bank loan.

4.1 A Scheme can be prepared by a beneficiary after consulting local technical persons of State animal husbandry department, DRDA, SLPP etc., dairy co-operative society/union/federation/commercial dairy farmers. If possible, the beneficiaries should also visit progressive dairy farmers and government/military/agricultural university dairy farm in the vicinity and discuss the profitability of dairy farming. A good practical training and experience in dairy farming will be highly desirable. The dairy co-operative societies established in the villages as a result of efforts by the Dairy Development Department of State Government and National Dairy Development Board would provide all supporting facilities particularly marketing of fluid milk. Nearness of dairy farm to such a society, veterinary aid centre, artificial insemination centre should be ensured. There is a good demand for milk, if the dairy farm is located near urban centre.

4.2 The scheme should include information on land, livestock markets, availability of water, feeds, fodders, veterinary aid, breeding facilities, marketing aspects, training facilities, experience of the farmer and the type of assistance available from State Government, dairy society/union/federation.

4.3 The scheme should also include information on the number of and types of animals to be

purchased, their breeds, production performance, cost and other relevant input and output costs with their description. Based on this, the total cost of the project, margin money to be provided by the beneficiary, requirement of bank loan, estimated annual expenditure, income, profit and loss statement, repayment period, etc. can be worked out and shown in the Project report. A format developed for formulation of dairy development schemes is given as Annexure I.

5. Scrutiny of Schemes by banks.

The scheme so formulated should be submitted to the nearest branch of bank. The bank's officers can assist in preparation of the scheme for filling in the prescribed application form. The bank will then examine the scheme for its technical feasibility and economic viability.

(A) **Technical Feasibility** - this would briefly include -

1. Nearness of the selected area to veterinary, breeding and milk collection centre and the financing bank's branch.
2. Availability of good quality animals in nearby livestock market. The distribution of important breeds of cattle and buffaloes are given in Annexure II. The reproductive and productive performance of cattle and buffalo breeds is given in Annexure III.
3. Availability of training facilities.
4. Availability of good grazing ground/lands.
5. Green/dry fodder, concentrate feed, medicines etc.
6. Availability of veterinary aid/breeding centres and milk marketing facilities near the scheme area.

(B) **Economic Viability** - this would briefly include -

1. Unit Cost - The average unit cost of dairy animals for some of the States is given in Annexure IV.
2. Input cost for feeds and fodders, veterinary aid, breeding of animals, insurance, labour and other overheads.
3. Output costs i.e. sale price of milk, manure, gunny bags, male/female calves, other miscellaneous items etc.
4. Income-expenditure statement and annual gross surplus.
5. Cash flow analysis.
6. Repayment schedule (i.e. repayment of principal loan amount and interest).

Other documents such as loan application forms, security aspects, margin money requirements etc. are also examined. A field visit to the scheme area is undertaken for conducting a techno-economic feasibility study for appraisal of the scheme. Model economics for a two animal unit and mini dairy unit with ten buffaloes are given in Annexure V and VI.

6. Sanction of Bank Loan and its Disbursement.

After ensuring technical feasibility and economic viability, the scheme is sanctioned by the bank. The loan is disbursed in kind in 2 to 3 stages against creation of specific assets such as construction of sheds, purchase of equipments and machinery, purchase of animals and recurring cost on purchase of feeds/fodders for the initial period of one/two months. The end use of the fund is verified and constant follow-up is done by the bank.

7. Lending terms - General

7.1 Unit Cost

Each Regional Office (RO) of NABARD has constituted a State Level Unit Cost Committee under the Chairmanship of RO-in-charges and with the members from developmental agencies, commercial banks and cooperative banks to review the unit cost of various investments once in six months. The same is circulated among the banks for their guidance. These costs are only indicative in nature and banks are free to finance any amount depending upon the availability of assets.

7.2 Margin Money

NABARD had defined farmers into three different categories and where subsidy is not available the minimum down payment as shown below is collected from the beneficiaries.

Sr.No.	Category of Farmer	Level of predevelopment return to resources	Beneficiary's Contribution
(a)	Small Farmers	Upto Rs.11000	5%
(b)	Medium Farmers	Rs.11001 - Rs.19250	10%
(c)	Large Farmers	Above Rs. 19251	15%

7.3 Interest Rate

As per the RBI guidelines the present rate of interest to the ultimate beneficiary financed by various agencies are as under :

No.	Loan Amount	CB's and RRB's	SLDB/SCB
(a)	Upto and inclusive of Rs.25000	12%	As determined by SCB/SLDB subject to minimum 12%
(b)	Over Rs. 25000 and upto Rs. 2 lakhs	13.5%	-do-
(c)	Over Rs. 2.0 lakhs	As determined by the banks	-do-

7.4 Security

Security will be as per NABARD/RBI guidelines issued from time to time.

7.5 Repayment Period of Loan

Repayment period depends upon the gross surplus in the scheme. The loans will be repaid in suitable monthly/quarterly instalments usually within a period of about 5 years. In case of commercial schemes it may be extended upto 6-7 years depending on cash flow analysis.

7.6 Insurance

The animals may be insured annually or on long term master policy, where ever it is applicable. The present rate of insurance premium for scheme and non scheme animals are 2.25% and 4.0% respectively.

8. Package of Common Management Practices Recommended for Dairy Farmers

Modern and well established scientific principles, practices and skills should be used to obtain maximum economic benefits from dairy farming. Some of the major norms and recommended practices are as follows :

I. Housing:

1. Construct shed on dry, properly raised ground.
2. Avoid water-logging, marshy and heavy rainfall areas.
3. The walls of the sheds should be 1.5 to 2 meters high.
4. The walls should be plastered to make them damp proof.
5. The roof should be 3-4 metres high.
6. The cattle shed should be well ventilated.
7. The floor should be pucca/hard, even non-slippery impervious, well sloped (3 cm per metre) and properly drained to remain dry and clean.
8. Provide 0.25 metre broad, pucca drain at the rear of the standing space.
9. A standing space of 2 x 1.05 metre for each animal is needed.
10. The manger space should be 1.05 metre with front height of 0.5 metre and depth of 0.25 metre.
11. The corners in mangers, troughs, drains and walls should be rounded for easy cleaning.
12. Provide 5-10 sq. metre loaf space for each animal.
13. Provide proper shade and cool drinking water in summer.
14. In winter keep animals indoor during night and rain.
15. Provide individual bedding daily.
16. Maintain sanitary condition around shed.
17. Control external parasites (ticks, flies etc.) by spraying the pens, sheds with Malathion or Copper sulphate solution.
18. Drain urine into collection pits and then to the field through irrigation channels.
19. Dispose of dung and urine properly. A gobar gas plant will be an ideal way. Where gobar gas plant is not constructed, convert the dung alongwith bedding material and other farm wastes into

compost.

20. Give adequate space for the animals. (The housing space requirement of crossbred cattle in various categories/age-groups is given in Annexure-VII).

II. Selection of Animal :

1. Immediately after release of the loan purchase the stock from a reliable breeder or from nearest livestock market.
2. Select healthy, high yielding animals with the help of bank's technical officer, veterinary/animal husbandry officer of State government/ Zilla Parishad, etc.
3. Purchase freshly calved animals in their second/third lactation.
4. Before purchasing, ascertain actual milk yield by milking the animal three times consecutively.
5. Identify the newly purchased animal by giving suitable identification mark (ear tagging or tattooing).
6. Vaccinate the newly purchased animal against disease.
7. Keep the newly purchased animal under observation for a period of about two weeks and then mix with the general herd.
8. Purchase a minimum economical unit of two milch animals.
9. Purchase the second animal/second batch after 5-6 months from the purchase of first animal.
10. As buffaloes are seasonal calvers purchase them during July to February.
11. As far as possible purchase the second animal when the first animal is in its late stage of lactation and is about to become dry, thereby maintaining continuity in milk production vis-a-vis income. This will ensure availability of adequate funds for maintaining the dry animals.
12. Follow judicious culling and replacement of animals in a herd.
13. Cull the old animals after 6-7 lactations.

III. Feeding of Milch Animals

1. Feed the animals with best feeds and fodders. (Feeding schedule is given in Annexure VIII).
2. Give adequate green fodder in the ration.
3. As far as possible, grow green fodder on your land wherever available.
4. Cut the fodder at the right stage of their growth.
5. Chaff roughage before feeding.
6. Crush the grains and concentrates.
7. The oil cakes should be flaky and crumbly.
8. Moisten the concentrate mixture before feeding.
9. Provide adequate vitamins and minerals. Provide salt licks besides addition of mineral mixture to the concentrate ration.
10. Provide adequate and clean water.
11. Give adequate exercise to the animals. Buffaloes should be taken for wallowing daily. In case this is not possible sprinkle sufficient water more particularly during summer months.
12. To estimate the daily feed requirement remember that the animals consume about 2.5 to 3.0 percent of their body weight on dry matter basis.

IV. Milking of Animals

1. Milk the animals two to three times a day.
2. Milk at fixed times.
3. Milk in one sitting within eight minutes.
4. As far as possible, milking should be done by the same person regularly.
5. Milk the animal in a clean place.
6. Wash the udder and teat with antiseptic lotions/lukewarm water and dry before milking.
7. Milker should be free from any contagious diseases and should wash his hands with antiseptic lotion before each milking.
8. Milking should be done with full hands, quickly and completely followed by stripping.
9. Sick cows/buffaloes should be milked at the end to prevent spread of infection.

V. Protection against Diseases

1. Be on the alert for signs of illness such as reduced feed intake, fever, abnormal discharge or unusual behaviour.
2. Consult the nearest veterinary aid centre for help if illness is suspected.
3. Protect the animals against common diseases.
4. In case of outbreak of contagious disease, immediately segregate the sick, in-contact and the healthy animals and take necessary disease control measures. (Vaccination schedule is given in Annexure IX).
5. Conduct periodic tests for Brucellosis, Tuberculosis, Johne's disease, Mastitis etc.
6. Deworm the animals regularly.
7. Examine the faeces of adult animals to detect eggs of internal parasites and treat the animals with suitable drugs.
8. Wash the animals from time to time to promote sanitation.

VI. Breeding Care

1. Observe the animal closely and keep specific record of its coming in heat, duration of heat, insemination, conception and calving.
2. Breed the animals in time.
3. The onset of oestrus will be within 60 to 80 days after calving.
4. Timely breeding will help achieving conception within 2 to 3 months of calving.
5. Breed the animals when it is in peak heat period (i.e. 12 to 24 hours of heat).
6. Use high quality semen preferably frozen semen of proven sires/bulls.

VII. Care during Pregnancy

Give special attention to pregnant cows two months before calving by providing adequate space, feed, water etc.

VIII. Marketing of Milk

1. Market milk immediately after it is drawn keeping the time between production and marketing of the milk to the minimum.
2. Use clean utensils and handle milk in hygienic way.

3. Wash milk pails/cans/utensils thoroughly with detergent and finally rinse with chloride solution.
4. Avoid too much agitation of milk during transit.
5. Transport the milk during cool hours of the day.

IX. Care of Calves

1. Take care of new born calf.
2. Treat/disinfect the navel cord with tincture of iodine as soon as it is cut with a sharp knife.
3. Feed colostrum to calf.
4. Assist the calf to suckle if it is too weak to suckle on its own within 30 minutes of calving.
5. In case it is desired to wean the calf immediately after birth, then feed the colostrum in bucket.
6. Keep the calf separately from birth till two months of age in a dry clean and well ventilated place.
7. Protect the calves against extreme weather conditions, particularly during the first two months.
8. Group the calves according to their size.
9. Vaccinate calves.
10. Dehorn the calves around 4 to 5 days of age for easy management when they grow.
11. Dispose of extra calves not to be reared/maintained for any specific purpose as early as possible, particularly the male calves.
12. The female calves should be properly reared.

Annexure I FORMAT FOR SUBMISSION OF SCHEMES

1. GENERAL

- i) Name of the sponsoring bank
- ii) Address of the controlling office sponsoring the scheme
- iii) Nature and objectives of the proposed scheme
- iv) Details of proposed investments

S.No	Investment	No. Of units
(a)		
(b)		
(c)		

- v) Specification of the scheme area (Name of District & Block/s)

S.No.

District

Block

vi) Names of the financing bank's branches:

S.No.

Name of the Branch/District

(a)

(b)

(c)

vii) Status of beneficiary/ies: (individual/Partnership/Company/Corporation/Co-operative Society / Others)

viii) In case of area based schemes, coverage of borrowers in weaker sections (landless labourers, small, medium & large farmers as per NABARD's norms, SC/ST, etc.)

ix) Details of borrowers profile (Not applicable to area based schemes)

(a) Capability

(b) Experience

(c) Financial Soundness

(d) Technical/Other special Qualifications

(e) Technical/Managerial Staff and adequacy thereof

2. TECHNICAL ASPECTS :

a) Location, Land and Land Development :

i) Location details of the project

ii) Total Area of land and its cost

iii) Site map

iv) Particulars of land development, fencing, gates, etc.

b) Civil Structures :

Detailed cost estimates along with measurements of various civil structure

- Sheds

- Store room

- Milk room

- Quarters, etc.

c) Equipment/Plant and Machinery :

i) Chaff cutter

ii) Silo pit

iii) Milking machine

iv) Feed grinder and mixer

v) Milking pails/milk cans

vi) Biogas plant

vii) Bulk coolers

viii) Equipment for manufacture of products

ix) Truck/van (price quotations for the above equipments)

d) Housing :

i) Type of housing

ii) Area requirement

- Adults

- Heifers (1-3 years)
- Calves (less than 1 year)

e) Animals :

- i) Proposed species
- ii) Proposed breed
- iii) Source of purchase
- iv) Place of purchase
- v) Distance (kms.)
- vi) Cost of animal (Rs.)

f) Production parameters :

- i) Order of lactation
- ii) Milk yield (ltrs. per day)
- iii) Lactation days
- iv) Dry days
- v) Conception rate
- vi) Mortality(%)
- Adults
- Young stock

g) Herd projection (with all assumptions) :

h) Feeding :

- i) Source of fodder and feed - Green fodder
 - Dry fodder
 - Concentrates
- ii) Fodder crop rotations
 - Kharif
 - Rabi
 - Summer
- iii) Fodder cultivation expenses
- iv) Requirement and costs :
 - Green Fodder, Dry Fodder, Concentrates : Cost(Rs. / Kg)
 - Green Fodder, Dry Fodder, Concentrates : Quantity required (kg./day) during Lactation, Dry Period, and for Young Stock

i) Breeding Facilities :

- i) Source :
- ii) Location :
- iii) Distance (km.) :
- iv) Availability of semen :
- v) Availability of staff :
- vi) Expenditure per animal/year

j) Veterinary Aid :

- i) Source
- ii) Location
- iii) Distance (km.)

- iv) Availability of staff
- v) Types of facilities available
- vi) If own arrangements are made -
 - a) Employed a veterinary doctor/stockman/consultant
 - b) Periodicity of visit
 - c) Amount paid/visit (Rs.)
- vii) Expenditure per animal per year (Rs.)
- k) Electricity :
 - i) Source
 - ii) Approval from SEB
 - iii) Connected load
 - iv) Problems of power failure
 - v) Arrangements for generator
- l) Water :
 - i) Source
 - ii) Quality of water
 - iii) Availability of sufficient quantity for drinking, cleaning and fodder production
 - iv) If investment has to be made, type of structure, design and cost
- m) Marketing of milk :
 - i) Source of sales
 - ii) Place of disposal
 - iii) Distance (km.)
 - iv) Price realised - (Rs. per liter of milk)
 - v) Basis of payment
 - vi) Periodicity of payment
- n) Marketing of other products :
 - i) Animal - age
 - place of sale
 - price expected
 - ii) Manure - Qty./animal
 - Price/unit (Rs.)
 - iii) Empty gunny bags
 - Number
 - Cost/bag (Rs.)
- o) Beneficiary's experience :
- p) Comments on technical feasibility :
- q) Government restrictions, if any :

3. FINANCIAL ASPECTS :

i) Unit Cost :

Sr.No	Name of the Investment	Physical units and specification	Unit cost with component wise break-up (Rs.)	Whether approved by state level unit cost committee
	Total			

ii) Down payment/margin/subsidy(Indicate source & extent of subsidy):

iii) Year-wise physical & financial programme :

Year	Investment	Physical Units	Unit Cost (Rs.)	Total Outlay (Rs.)	Margin/ Subsidy (Rs.)	Bank loan (Rs.)	Refinance Assistance (Rs.)
Total							

iv) Financial viability (comment on the cash flow projection on a farm model/unit and enclose the same.)

Particulars :

a) Internal Rate of Return (IRR) :

b) Benefit Cost Ratio (BCR) :

c) Net Present Worth (NPW) :

v) Financial position of the borrowers (to be furnished in case of corporate bodies/partnership firms)

a) Profitability Ratio :

i) GP Ratio

ii) NP Ratio

b) Debt Equity Ratio :

c) Whether Income Tax & other tax obligations are paid upto date :

d) Whether audit is upto date (enclose copies of audited financial statements for the last three years)

vi) Lending Terms :

i) Rate of Interest :

ii) Grace Period :

iii) Repayment Period :

iv) Nature of Security :

v) Availability of Government guarantee wherever necessary :

4. INFRASTRUCTURAL FACILITIES :

- a) Availability of technical staff with bank/implementing authority for monitoring
- b) Details of -
 - i) technical guidance
 - ii) training facilities
 - iii) Govt support/extension support
- c) Tie-up arrangements with marketing agencies for loan recovery
- d) Insurance -
 - Type of policy
 - Periodicity
 - Rate of premium
- e) Whether any subsidy is available, if so amount per unit
- f) Arrangements for supply of green fodder and cattle feed