



डेयरी क्षेत्र विकास योजना (2018-23)

**AREA DEVELOPMENT SCHEME FOR
DAIRY DEVELOPMENT (2018-23)**



जिला: नामसै

DISTRICT: NAMSAI

राज्य: अरुणाचल प्रदेश

STATE: ARUNACHAL PRADESH

राष्ट्रीय कृषि और ग्रामीण विकास बैंक

**NATIONAL BANK FOR AGRICULTURE AND RURAL
DEVELOPMENT**

अरुणाचल प्रदेश क्षेत्रीय कार्यालय

नाबार्ड टावर, बैंक तिनाली, ईटानगर- 791111

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Arunachal Pradesh

Introduction

Enacting the “Arunachal Pradesh Re-organization of District (Amendment) act of 2013” Namsai District carved out of Lohit District as the 18th District of the State vide Govt. of A.P. Notification No. DAD-34/2012(pt). Itanagar on the 23rd July 2014. The district is located between 95.45 to 96.20 E Longitude/ 27.30 to 27.55 N Latitude and surrounded by Tinsukia District of Assam in the West & South-west, Changlang district in the south & South-east, Anjaw district & Lohit in the East and Lohit in the North. It has a total geographical area of 1597 sq. km.

The district comprised of 5 (five) Administrative Circles namely – Lekang, Namsai, Piyong, Lathao and Chongkham and 3(three) C.D. Blocks namely – Lekang CD Block, Namsai CD Block and Chongkham CD Block.

The local self-government is three tier system with Zila Parishad at District level, Anchal Samiti at Block level/Circle level, Gram Panchayat at village/cluster level. The Zilla Parishad of this new district has not yet been created, and the Lohit District Zilla Parishad is functional for both Lohit and Namsai district.

Namsai district has a sub-tropical climate. The district experiences very heavy rainfall from March to August. The climate of the district varies from place to place. The foot hill area is quite hot during summer (16oC -36 oC) and moderately cold in winter, where as in the higher altitude places, the climate is pleasant during summer but the winter is extremely cold (10 oC-25 oC).

The rainfall of the district is also quite variable. Where Namsai recorded 2780.97 mm of average mean annual rainfall, Lekang recorded maximum of 2492.43 mm and Chongkham has an average mean annual rainfall of 2074.87 mm.

Agriculture is the main activity of the rural people in the district. Apart from agriculture and horticulture, rural people are also engaged in dairy, poultry, handicrafts, small trade, sheep /goat rearing, etc.

Agriculture is the main activity of the rural people in the district. Apart from agriculture and horticulture, rural people are also engaged in dairy, poultry, handicrafts, small trade, sheep /goat rearing, etc.

Dairy farming is a traditional activity in Namsai district and few farmers are rearing either indigenous or crossbred cows. Green fodder cultivation is more common in the district and there is a fodder market for green fodder in the district. Dry fodder is also available and urea treatment of dry fodder at farmer level is also not uncommon.

Government of India has launched various schemes under animal husbandry sector to encourage banks to finance for diversified activities under dairy, sheep, goat, pig and poultry farming. Dairy Entrepreneurship Development Scheme (DEDS) is one of these

schemes which got overwhelming response among farmers throughout the country. DEEDS scheme is extended for 2017-18 and communicated to banks vide NABARD external Circular No.132/DoR-29/2017 dated 26 May 2017.

In view of the above, this Area Development Scheme (ADS) has been prepared for Namsai district for implementation by 8 branches of banks viz., (a) 2 branches of State Bank of India (SBI) located at Namsai HQ and Chongkham, (b) 2 branches of United Bank of India located at Namsai & Mahadevpur, (c) 1 branch of Bank of India at Namsai, (d) 1 branch of ICICI bank at Namsai and (e) 2 branches of Arunachal Pradesh State Co-operative Apex Bank Ltd.(APSCABL) at Namsai & Chongkham during 2018-19 to 2022-23 in the district.

The document is prepared through a process of wide consultations with all stakeholders at the district level. Data and information for preparation of ADS were collected from various line departments.

2. Forward and backward linkages

Total geographical area of Namsai is 1597 sq. Km which is inhabited by 3145 Nos. of households. Population of crossbreed poultry and Indigenous poultry is 92038 Nos. As per the 19th Livestock Census held in 2012, there are 7 Veterinary Dispensary, 9 Veterinary aid Centre and 14 Cattle Upgrading Centre. There is also 2 District Poultry Farm in the district. Milk production in the state is 50000 tons and Per Capita availability of Milk 105 gram/person/day during 2015-16.

Under CM's White Revolution Programme Govt. of Arunachal Pradesh has initiated new Dairy Development Plans for potential districts like Lower Dibang valley, Lohit, Namsai, Papumpare & West Kameng, in order to create a value chain from milk aggregation to dairy processing in the State. For this State Govt. has also inked an MoU with NDDB. Govt. of Arunachal Pradesh has also announced CM's Dairy Entrepreneurship Capital Subsidy Schemeto provide 25% back ended capital subsidy to Entrepreneurs by the GoAP which will be over and above 33.33% subsidy provided by Central government.

There is no milk processing infrastructure in Namsai district. The nearest Dairy Plant is located in Assam.

3. Selection of area

The Area Development Scheme for development of Dairy sector will be implemented in 178 villages in all the blocks of the Namsai District. All the 8 branches of banks viz., (a) 2 branches of State Bank of India (SBI) located at Namsai HQ and Chongkham, (b) 2 branches of United Bank of India located at Namsai & Mahadevpur, (c) 1 branch of Bank of India at Namsai, (d) 1 branch of ICICI bank at Namsai and (e) 2 branches of Arunachal Pradesh State Co-operative Apex Bank Ltd.(APSCABL) at Namsai & Chongkham will be involved in loaning for successful implementation of ADS scheme.

4. Selection of beneficiaries

The key to successful implementation of the Area Development Scheme lies in the right selection of farmers. The beneficiaries who will be selected under this project will be those who are already in this activity of Dairy farming at their individual level and have the basic knowledge of the activity. The farmers of all the blocks traditionally take up farming and dairy activity. The identified beneficiaries should have basic knowledge of the activity. However, capacity building of the beneficiaries to manage a dairy unit will be undertaken by KVK and Animal Husbandry Dept.

5. Capacity building of the beneficiaries

There are 7 Veterinary Dispensary, 9 Veterinary Aid Centre in the district. There is also 2 District Poultry Farm in the district. The beneficiaries identified under the project will be given capacity building training on scientific rearing and management of poultry units at KVK. Efforts will be made to conduct such programmes in collaboration with KVK. If necessity arises at a future date, NABARD may provide budgetary support to conduct training programmes for dairy farmers through KVK and NGOs. (*Data pertains to undivided Lohit & Namsai).

6. Techno economic assumptions & project components

A. Techno economic parameters

Type of Animal	Cross Bred Indigenous Cow
No. of Animals	10
Milk yield / day (litres)	6-10
Cost of Animal (Rs./animal)	560000.00
Transportation Cost/Animal	25000.00
Equipment cost / Animal	5000.00
Average Milk Yield (litre/day)	8
Green Fodder requirements (Kg./Animal/ day)	10.00
Dry Fodder (Kg./Animal/ day)	5.00
Concentrate Feed- maintenance((Kg./Animal/ day)	1.25
Concentrate Feed- Production ((Kg./Animal/ day) 2.75 for 8kg/ 0.25 kg additional for every kg of milk	2.75
Concentrate Feed- Last 60 days of pregnancy((Kg./Animal/ day)	0.50
Lactation period (days)	210
Dry period (days)	120
Calving interval (days)	390
Veterinary Aid (Rs./ Animal /year	1000.00
Price of Milk (Rs./ Litre)	40.00
Income from sale of manure(Rs./ Animal / year)	2000.00
Insurance premium (%)	4
Repayment period	5 years

B. Lactation chart

S. No.	Particulars	Years					
		I	II	III	IV	V	VI
1	<u>Lactation Days</u>						
a)	First batch	210	210	240	240	260	275
b)	Second batch	180	210	240	260	275	275
	Total	455	570	575	575	570	550
2	<u>Dry Days</u>						
a)	First batch	90	70	65	65	70	90
b)	Second batch	-	90	90	90	90	90
	Total	90	160	155	155	160	180

7. Project cost for dairy unit

Unit Cost for setting up of one unit Dairy with 09 heads cross breed cows and a Bull.

Sr.No.	Particulars	Amount (In lakh)
1	Cost of 09 nos. of cross breed cows @ Rs.60000/- cow yielding 15 ltrs of milk and cost of one breeding bull Rs.20000/-	Rs. 5.60
2	Cost of Semi-intensive cow shed with C.G.I. sheet roofing @20 sq. ft. /cow @Rs.50/-sq. ft./25 sq.ft./bull	Rs.0.50
3	Insurance @4% per animal	Rs.0.54 *
4	Cost of conc. Feed Ls@3 kg/cow @Rs.20/kgx10 months	Rs.1.08
5	Vety coverage (cost of medicine, vaccine) electricity charges Dairy equipments	Rs.0.10
6	Cost of TPT from Guwahati to Itanagar	Rs.0.25
	Total :	Rs.8.12 **
		Rs.8.00
		(Say)
	Promoters Margin (10%)	Rs.0.80
	Bank Loan (90%)	Rs.7.20

* Insurance @4% per animal as given by DAH&V, GoAP is Rs.0.54 lakh, however, it works at Rs.0.22 lakh.

** Total as given by DAH&V, GoAP is Rs.8.12 lakh, however, it works at Rs.8.07 lakh.

NB: Total Unit cost is inclusive of construction of Shed.

8. Financing Agencies

The ADS scheme will be implemented by 8 branches of banks viz., (a) 2 branches of State Bank of India (SBI) located at Namsai HQ and Chongkham, (b) 2 branches of United Bank of India located at Namsai & Mahadevpur, (c) 1 branch of Bank of India at Namsai, (d) 1 branch of ICICI bank at Namsai and (e) 2 branches of Arunachal Pradesh State Co-operative Apex Bank Ltd.(APSCABL) at Namsai & Chongkham.

9. Physical and financial programme

Bank-wise physical and financial programme has been given as under:

(Rs. in Lakh)

Year	Bank	Unit Cost	Namsai		Chongkham		Lekhang / Mahadevpur		Total		Remarks
			Phy.	BL	Phy.	BL	Phy.	BL	Phy.	BL	
2018-19											
1	SBI Namsai	6.60	2	11.88		0.00	2	11.88	4	23.76	Mini Dairy(only animal)
2	SBI Chongkham	6.60		0.00	3	17.82		0.00	3	17.82	
3	UBI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
4	UBI Mahadevpur	6.60		0.00		0.00	1	5.94	1	5.94	
5	BOI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
6	ICICI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
7	APStCABL Namsai	6.60	1	5.94		0.00	1	5.94	2	11.88	
8	APStCABL Chongkham	6.60		0.00	2	11.88		0.00	2	11.88	
9	SBI Namsai	8.00	2	14.40		0.00	2	14.40	4	28.80	Mini Dairy with Shed
10	SBI Chongkham	8.00		0.00	3	21.60		0.00	3	21.60	
11	UBI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
12	UBI Mahadevpur	8.00		0.00		0.00	1	7.20	1	7.20	
13	BOI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
14	ICICI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
15	APStCABL Namsai	8.00	1	7.20		0.00	1	7.20	2	14.40	
16	APStCABL Chongkham	8.00		0.00	2	14.40		0.00	2	14.40	
	Sub Total		12	78.84	10	65.70	8	52.56	30	197.10	
2019-20											
1	SBI Namsai	6.60	3	17.82		0.00	2	11.88	5	29.70	Mini Dairy(only animal)
2	SBI Chongkham	6.60		0.00	3	17.82		0.00	3	17.82	
3	UBI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
4	UBI Mahadevpur	6.60		0.00		0.00	1	5.94	1	5.94	
5	BOI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
6	ICICI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
7	APStCABL Namsai	6.60	1	5.94		0.00	1	5.94	2	11.88	

8	APStCABL Chongkham	6.60		0.00	2	11.88		0.00	2	11.88	
9	SBI Namsai	8.00	3	21.60		0.00	2	14.40	5	36.00	Mini Dairy with Shed
10	SBI Chongkham	8.00		0.00	3	21.60		0.00	3	21.60	
11	UBI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
12	UBI Mahadevpur	8.00		0.00		0.00	1	7.20	1	7.20	
13	BOI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
14	ICICI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
15	APStCABL Namsai	8.00	1	7.20		0.00	1	7.20	2	14.40	
16	APStCABL Chongkham	8.00		0.00	2	14.40		0.00	2	14.40	
	Sub Total		14	91.98	10	65.70	8	52.56	32	210.24	
2020-21											
1	SBI Namsai	6.60	4	23.76		0.00	2	11.88	6	35.64	Mini Dairy(only animal)
2	SBI Chongkham	6.60		0.00	4	23.76		0.00	4	23.76	
3	UBI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
4	UBI Mahadevpur	6.60		0.00		0.00	1	5.94	1	5.94	
5	BOI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
6	ICICI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
7	APStCABL Namsai	6.60	1	5.94		0.00	1	5.94	2	11.88	
8	APStCABL Chongkham	6.60		0.00	2	11.88		0.00	2	11.88	
9	SBI Namsai	8.00	3	21.60		0.00	2	14.40	5	36.00	Mini Dairy with Shed
10	SBI Chongkham	8.00		0.00	3	21.60		0.00	3	21.60	
11	UBI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
12	UBI Mahadevpur	8.00		0.00		0.00	1	7.20	1	7.20	
13	BOI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
14	ICICI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
15	APStCABL Namsai	8.00	1	7.20		0.00	1	7.20	2	14.40	
16	APStCABL Chongkham	8.00		0.00	2	14.40		0.00	2	14.40	
	Sub Total		15	97.92	11	71.64	8	52.56	34	222.12	
2021-22											
1	SBI Namsai	6.60	5	29.70		0.00	2	11.88	7	41.58	Mini Dairy(only animal)
2	SBI Chongkham	6.60		0.00	5	29.70		0.00	5	29.70	
3	UBI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
4	UBI Mahadevpur	6.60		0.00		0.00	1	5.94	1	5.94	
5	BOI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
6	ICICI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
7	APStCABL Namsai	6.60	1	5.94		0.00	1	5.94	2	11.88	

8	APStCABL Chongkham	6.60		0.00	2	11.88		0.00	2	11.88	
9	SBI Namsai	8.00	3	21.60		0.00	2	14.40	5	36.00	Mini Dairy with Shed
10	SBI Chongkham	8.00		0.00	3	21.60		0.00	3	21.60	
11	UBI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
12	UBI Mahadevpur	8.00		0.00		0.00	1	7.20	1	7.20	
13	BOI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
14	ICICI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
15	APStCABL Namsai	8.00	1	7.20		0.00	1	7.20	2	14.40	
16	APStCABL Chongkham	8.00		0.00	2	14.40		0.00	2	14.40	
	Sub Total		16	103.86	12	77.58	8	52.56	36	234.00	
2022-23											
1	SBI Namsai	6.60	6	35.64		0.00	3	17.82	9	53.46	Mini Dairy(only animal)
2	SBI Chongkham	6.60		0.00	6	35.64		0.00	6	35.64	
3	UBI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
4	UBI Mahadevpur	6.60		0.00		0.00	1	5.94	1	5.94	
5	BOI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
6	ICICI Namsai	6.60	1	5.94		0.00		0.00	1	5.94	
7	APStCABL Namsai	6.60	1	5.94		0.00	1	5.94	2	11.88	
8	APStCABL Chongkham	6.60		0.00	2	11.88		0.00	2	11.88	
9	SBI Namsai	8.00	3	21.60		0.00	2	14.40	5	36.00	Mini Dairy with Shed
10	SBI Chongkham	8.00		0.00	3	21.60		0.00	3	21.60	
11	UBI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
12	UBI Mahadevpur	8.00		0.00		0.00	1	7.20	1	7.20	
13	BOI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
14	ICICI Namsai	8.00	1	7.20		0.00		0.00	1	7.20	
15	APStCABL Namsai	8.00	1	7.20		0.00	1	7.20	2	14.40	
16	APStCABL Chongkham	8.00		0.00	2	14.40		0.00	2	14.40	
	Sub Total		17	109.80	13	83.52	9	58.50	39	251.82	
Grand Total			74	482.40	56	364.14	41	268.74	171	1115.28	

**Note: Bank Loan @ 90% of
TFO**

10. Project Profitability

The project profitability for six years has been projected as under:

Sr. No.	Particulars / Years	I	II	III	IV	V	VI
I.	Income (Rs.)						
i	From sale of milk	403200.00	504000.00	604800.00	705600.00	806400.00	907200.00
ii	From sale of manure	2000.00	2500.00	3000.00	3500.00	4000.00	4500.00
	Total Income	405200.00	506500.00	607800.00	709100.00	810400.00	911700.00
II	Expenditure (Rs.)						
i	Concentrate Feed	108000.00	110160.00	112363.20	114610.46	116902.67	119240.73
ii	Green Fodder						
iii	Dry Fodder						
iv	Veterinary Aid	10000.00	10200.00	10404.00	10612.08	10824.32	11040.81
v	Electricity & Water						
vi	Insurance	54000.00	55080.00	56181.60	57305.23	58451.34	59620.36
vii	Misc. exp. If any	25000.00	25500.00	26010.00	26530.20	27060.80	27602.02
viii	Semi Intensive Cow shed	50000.00	51000.00	52020.00	53060.40	54121.61	55204.04
	Total Expenditure	247000.00	251940.00	256978.80	262118.38	267360.74	272707.96
	Gross Surplus (Rs.)	158200.00	254560.00	350821.20	446981.62	543039.26	638992.04

11. Financial Analysis

The financial analysis for a period of six years has been given as under:

Sr. No.	Particulars / Years	I	II	III	IV	V	VI
I.	Cost (Rs.)						
i	Capital Cost	610000.00	0.00	0.00	0.00	0.00	0.00
ii	Recurring Cost	190000.00	190000.00	190000.00	190000.00	190000.00	190000.00
iii	Total Cost	800000.00	190000.00	190000.00	190000.00	190000.00	190000.00
II	Benefits (Rs.)						
i	Income	405200.00	506500.00	607800.00	709100.00	810400.00	911700.00
ii	Closing Stock Value						
	Total Benefits	158200.00	254560.00	350821.20	446981.62	543039.26	638992.04
	Net Benefits	158200.00	254560.00	350821.20	446981.62	543039.26	638992.04
	Discount Factor						0.51
	PW of Cost at 12% DF	405304.90	96259.91	96259.91	96259.91	96259.91	96259.91
	PW of Benefit at 12% DF	80149.04	128968.02	177736.94	226454.80	275120.59	323733.25
	Net Present Value						325558.18
	Benefit Cost Ratio (BCR)						1.37>1
	Internal Rate of Return (IRR) of the Scheme						>12%

12. Sensitivity Analysis & SWOT analysis

(I) Sensitivity analysis

By assuming 5% increase in cost and 5% decrease in benefits, NPV, BCR and IRR has been worked out and presented in a tabular form

Sr. No.	Years / Particulars	I	II	III	IV	V	VI
i	Total cost after 5% increase	840000.00	199500.00	199500.00	199500.00	199500.00	199500.00
ii	Total benefits after 5% reduction	150290.00	241832.00	333280.14	424632.54	515887.29	607042.44

(II) SWOT analysis

a. Strengths:

- i) In the scheme area other supplementary activity will be added which will enhance farmers' income and thereby help in doubling the farmers' income.
- ii) Adequate availability of forward and backward linkages in the scheme area.

b. Weaknesses:

- i) Inadequate awareness among the farmers on scientific dairy farming.
- ii) Limited market for sale of milk and non availability of milk chilling units in the area.

c. Opportunities:

- i) Growing demand for milk from consumers in the area due to increasing in income level.
- ii) Good road connectivity and Proximity to Assam will help in getting greater access to market.
- iii) CM's Dairy Entrepreneurship Capital Subsidy Scheme to provide 25% back ended capital subsidy to Entrepreneurs by the GoAP

d. Threats:

- i) Frequent Changes in Govt. policy leading to adverse procurement price.
- ii) Prolong Monsoons adversely affect the milk production and thereby milk procurement.

13. Repayment Period

Year	Income (Rs.)	Expenses (Rs.)	Gross Surplus	EMI Instalments	Net Surplus
I	405200.00	247000.00	158200.00	94920.00	63280.00
II	506500.00	251940.00	254560.00	152736.00	101824.00
III	607800.00	256978.80	350821.20	210492.72	140328.48
IV	709100.00	262118.38	446981.62	268188.97	178792.65
V	810400.00	267360.74	543039.26	325823.55	217215.70

14. Implementation and Monitoring

This scheme is expected to be implemented through the active cooperation of all stakeholders and thereby able to achieve increase in production of milk through adoption of scientific method. Bankers are expected to be extend finance under the scheme. Review of the implementation of the scheme in DCC/DLRC meetings.

15. Conclusion

Livestock rearing play an important role in Farmer's income in the district. The development of dairy sector would lead to enhancement of income of the farmer in the district. Supply of quality cross breed cows, feeds, medicines etc. will help in increasing the production of milk and thus will help in increasing the farmers' income in the district. Moreover setting up of adequate number of veterinary dispensaries will also help in taking care of cattle health in the district which is directly linked with the milk production. Diversifying the farming and take necessary measures to increase the productivity and monetary returns that farmers get from their produce which require infrastructure development and also price support.

Adoption of sustainable integrated cum-diversified climate resilient scientific livestock farming practices for enhancing income of beneficiary. Dairy farming in all the blocks are already traditionally practiced and in great demand. Scientific rearing along with capital investment can lead to more earnings.

Processing and Marketing of milk by establishing processing units, mapping organized markets and development of direct linkage network marketing system for farmers to avoid middle man & traders etc. may help in achieving Govt. of India's aim for Doubling of Farmers income by 2022.