

**क्षेत्र विकास योजनाएं 2018-23**  
**AREA BASED SCHEMES 2018-23**

दुग्ध विकास Dairy Development  
भेड़/बकरी पालन Sheep/Goat Rearing

पृष्ठ संख्या/Page No. 1

पृष्ठ संख्या/Page No. 7

**जिला : अशोक नगर**  
**District : ASHOK NAGAR**



**राष्ट्रीय कृषि और ग्रामीण विकास बैंक**  
**मध्य प्रदेश क्षेत्रीय कार्यालय, भोपाल**

**NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT**  
**MADHYA PRADESH REGIONAL OFFICE, BHOPAL**



### प्राक्कथन

नाबार्ड वर्ष 1990 से निरन्तर हर जिले से जुड़ी संभाव्यता युक्त ऋण योजना तैयार करता आ रहा है। पिछले तीन वर्षों से इन योजनाओं के साथ-साथ नाबार्ड प्रत्येक जिले में निवेश ऋण को बढ़ावा देने हेतु क्षेत्र विकास योजनाएं भी तैयार कर रहा है ताकि ग्रामीण क्षेत्रों, विशेषकर कृषि क्षेत्र, में पूंजी का निर्माण हो, जिससे किसानों की सकल आय में वृद्धि हो सके।

जिलों में पदस्थापित नाबार्ड के जिला विकास प्रबंधक द्वारा राज्य/केंद्र सरकार/प्रमुख बैंकों की शाखाओं, अनुसंधान संस्थानों, किसानों/अन्य हितधारकों तथा संबंधित लाइन विभागों के साथ विस्तृत परामर्श के बाद प्रत्येक जिले के लिए 02 क्षेत्रीय विकास योजनाएं तैयार की गई हैं ताकि संबंधित क्षेत्रों के विकास के लिए आवश्यक रोड मैप के लिए स्पष्ट रण-नीति बनाई जा सके। इस योजना में प्रत्येक हितधारक की भूमिका स्पष्ट रूप से उल्लिखित है और इसे डीसीसी/डीएलसीसी में अनुमोदनार्थ प्रेषित किया जाएगा।

जिले में क्षेत्र विकास योजनाओं को क्लस्टर के आधार पर विशिष्ट पहचान वाले क्षेत्रों में बैंकों द्वारा वित्तपोषित करने का अवसर देगा, जो बैंकों के परिचालन क्षेत्र में उपलब्ध बैकवार्ड/फारवार्ड लिंकेज के विकास तथा सुदृढीकरण में मदद करेगा।

मैं, इन क्षेत्र विकास योजनाओं को तैयार करने हेतु विभिन्न हितधारकों, राज्य सरकार के अधिकारियों एवं बैंकर्स द्वारा प्रदत्त सहायता और सहयोग की सराहना करता हूँ। मुझे विश्वास है कि यह क्षेत्र विकास योजना पुस्तिका बैंकर्स, राज्य/जिला अधिकारियों और अन्य हितधारकों के लिए उपयोगी दस्तावेज सिद्ध होगी।

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के आर राव

मुख्य महाप्रबंधक

### Foreword

NABARD has been preparing potential linked credit plan for the districts since 1990. In the last three years, we have been preparing along with PLPs, Area Development Schemes to promote investment credit in the districts, so as to provide impetus to capital formation in rural areas particularly in agriculture sector, which will help farmers in increasing their gross income.

The District Development Manager of NABARD posted in the district has prepared Area Development Scheme for two sectors after wide consultation with line departments concerned of State / Central Govt., controlling offices / branches of major banks, research institutes, practising farmers and other stakeholders so as to have a clear view of the road map required for development of the sectors concerned in the district. The roles of each stakeholder in the scheme are clearly outlined and the same will be placed in DCC/DLCC for approval.

The area development scheme in the district will give banks an opportunity to finance specific identified sector on a cluster basis, which will help in growth / strengthening of both backward / forward linkages available in the area of operation.

I appreciate the excellent support and cooperation extended by various stake holders viz., State Government officials / Bankers in preparation of the Area Development Schemes.

I am sure that this Area Development Scheme booklet will serve as a useful document to the Bankers, State / District officials and other stake holders.

*K R Rao*

K R Rao

Chief General Manager



## Area Based Schemes

### Area Development Schemes

#### 1. Introduction

Ashok Nagar district is situated in the Zone 8 of Sub Agro Climatic Region, which comes under Regional Climatic Zone of Central Plateau of Madhya Pradesh. It has four blocks with a total geographical area of 4674 sq. km. constituting 1.52% of the total area of the State. The average rainfall of the district is 882 mm per annum which precipitates in about 70 days. The district population as per 2011 Census is 8.45 lakh with 6.91 lakh in rural areas. The total irrigated area as a percentage to net sown area is 59.54%.

As agriculture is major source of income in the district and farm credit has a vital role in realizing the objective of doubling of farmers' income by the year 2022. The GoMP has prepared district specific year wise road map for doubling of farmers' income starting from the year 2016-17. The total operational land holdings in the district were 145350 hectare, the area which cultivated more than once. There are ample number of population as agricultural labourers in the district, who depend on agriculture for their livelihood. Sixty one percent of the land holdings belong to Small and Marginal farmers (having holdings less than less than 2 ha). *Kharif* is the major cropping season with nearly 76% of gross cropped area. The major crops of the district are maize, soybean, cotton, paddy, blackgram and groundnut (kharif Season) and wheat and gram (rabi season). There is a growing demand for milk and it is gradually increasing. As sch dairy farming is not new and many are already having the basic skill set to rear milch animals. This offers a great opportunity for taking dairy as an economically important activity in a focused manner. Agriculture and allied activities constitute the single largest contributor to the Gross Domestic Product (GDP). Animal Husbandry and Dairying play an important role in development of India's economy.

The Animal husbandry Sector plays an important and vital role in GSDP of Madhya Pradesh State, which is to the tune of nearly about 5.0%. This sector also contributes to product nutritive food, rich in animal protein, to the general public and good supplementary income to the economically weaker section of society like ST and SC, small farmers, marginal farmers and agricultural labourers. In addition, it offers a good employment generation opportunity, if adopted on a large commercial basis. A large number of rural women find good opportunities to work in several operations of livestock production. The main goal of formulation of Area Development Scheme (ADS) is as follows:

- To increase the production base of milk so that it would open up avenues for processing and value addition.
- To have proper networking/convergence/linkage of various development projects and support programs of all stake holders and partners in development so as to ensure maximum accrual of benefits to the ultimate beneficiaries from these support measures.
- To actualize increased investment credit flow to the sector for bringing out definite visible impact at the grass root level in terms of sustainable livelihood and income generation by the rural poor .
- Poverty alleviation, economic upliftment and empowerment in rural areas through capital formation and productive economic asset creation.
- Provide much needed support to the process for "Doubling Farmers' Income by 2022" by allowing the primary producers 'being financed under a cluster based approach under ADS to federate them into producer collectives in terms of FPOs /FPCs so that economy of scale can be harnessed.

The allied activities sector of dairy farming has potential of providing good returns to the small and marginal tribal farmers. There is also a good scope for financing dairy as an important IGA/ livelihood support measures for economic empowerment of poor women from rural households as part of various Central as well as State sponsored poverty alleviation programmes such as NRLM. It may be appreciated that SF/MF & Landless farmers/rural women have basic aptitude for rearing milch animals as a routine allied activities. Further, to supplement the various poverty alleviation programs/ measures being initiated by the GoI, GoMP, NABARD has devised and formulated the Area Development Scheme (ADS). This entails close support and partnership of all stakeholders viz. target Farmers/SHG/JLG members, Dist. offices of veterinary services, RSETI- Ashoknagar , SBI-LDM Office, Dist. Coordinators of all important banks operating in the district.



## 2. Forward and backward linkages

Dairy farming is one of the major subsidiary activities in the district providing employment opportunities to the rural poor. The milk production was 1.59 lakh tonnes for the district during the year 2016-17, which is 12.83% higher than the previous year. The per capita availability of milk per day in the district is 455 gms as against the State average of 418 gms per day and recommended intake of 250 gms per day. Milk is also sent to the neighbouring districts. The climate of the state is not conducive to adaptability of cross bred and up-graded bovines. Breeding policy of the state recommends indigenous milch breeds like Haryana, Gir, Tharparker, Sahiwal etc. to be taken up at large scale, especially in rural areas along with cross breeding with Jersey as well as Holstein Friesian in urban or semi urban areas.

There are four cattle markets in Ashoknagar district where cattle of local/desi breeds are available. Further, MP Cattle Development Corporation also have arrangement for procuring and supplying improved cattle from nearby centers. At present the dairy activity as one of the commercial activity is mainly confined to Ashoknagar and Chanderi blocks of the district.

Department of Animal Husbandry planning to develop waste land into grazing land. Similarly, for fodder development, the Forest department is likely to develop waste land into grazing land. Dry fodder sources are mainly wheat, maize and jowar straw and other agricultural by-product.

### Feed and Fodder Development

Milk production in major part of the district involves small producers with little or no land, each of them raising one or two non-descript / cross bred cows or buffaloes. They largely depend on crop residues and natural herbage for feeding their animals. Very few farmers who undertake the dairy activity on a commercial basis only produces and cultivate fodder.

District Animal Husbandry department distributes free fodder seedlings to farmers to ensure availability of quality fodder to dairy entrepreneurs in the district. Cattle feed is also available locally to farmers.

Concentrate feeds are supplied by the MP Cattle Development Corporation in the district. There are enough private shops at district level where animal feed are available.

### Milk Marketing Infrastructure:

Dairy activity is mainly confined to Ashoknagar and Chanderi blocks of the district. The entrepreneurs who practice dairy activity on a commercial basis have their own arrangements for marketing of milk. There is 1 milk route in the district. Bhopal Dugdh Sangh is operating a dairy at Kushmodha, Guna with a chilling plant capacity of 10000 litres per day. The capacity utilisation is 19% and no products are manufactured in the dairy instead the milk is sent to Bhopal.

Keeping in view the positive aspects of dairy farming infrastructure and procurement network, it is proposed to take up an area based dairy scheme. Even though the entire district has potential for dairy development, initially it is proposed to implement the scheme in Ashoknagar block having very high potential for financing milch animals. Based on the response and making suitable mid-term corrections, the area for dairy activity can be upscaled. Further, other activities will also be taken up in the district under area based approach.

## 3. Selection of Area

Block -1 (Ashoknagar): Akhai Tappa, Amahi Pachhar, Basapur, Chhipon, Gopalpur, Rati Kheda, Madhopur, Sijawat, Lidhora, Biyani.

Block -2 (Chanderi): Barai, Derasa, Deokani, Jalalpur, Madroli, Pagra, Chimla, Ludhaya, Sona Jama Khedi, Bhatoli, Amrod, Mogara.

A good number of villages in these blocks are around the milk route and there will be a need to extend a few routes. Availability of veterinary care, procurement network and branch network is satisfactory in the selected area. While the district is having potential for dairy activities, it is intended to have an intensive development of Murrah Buffalo with credit support in the above blocks and hence area based scheme preparation is attempted.

## 4. Selection of beneficiaries

Capacity building of the beneficiaries on scientific rearing and feeding of the dairy animals for selected beneficiaries will be done through the training program organized by Rural Self Employment Training Institutes (RSETI), State Bank of India and with the help of Krish Vigyan Kendra.

In most of the above blocks, dairy processing units are arranging cattle breeding services. Other services available from AH Department in terms of technology support, fodder cultivation, animal health, subsidy



etc. will be tagged to these areas. In most of the proposed areas other interventions such as wadi development FCs, low cost Polyhouse are being implemented. The beneficiaries from these area are aware of the activity and the scheme will include such beneficiaries who are also willing to take up fodder cultivation.

For landless or small and marginal farmers interested in undertaking dairy farming, 2 Graded Murrah Buffalo unit will be provided. For other farmers, based on their capability and interest, more than 2 milch animals will be suggested. The animal producing on an average about 10 litres milk per day will be preferred. Such types of animals are available within the district as well as in the neighbouring districts Guna & Gwalior. In this exercise, the department will extend its help.

## 5. Capacity building of the beneficiaries

Specific training programme on rearing of milch animals will be provided by RSETTI and KVK.

## 6. Techno-Economic Parameters

Type of Animal	Graded Murrah Buffalo
No. of Animals	2
No. of animals/batch	1 (The second animal will be provided after a gap of around 6 months)
Cost of Animal (₹./animal)	60000
Transportation Cost/Animal	1000
Average Milk Yield (litre/day)	10
Floor space (sqft) per adult animal	50
Floor space (sqft) per calf	20
Cost of construction per sqft (₹.)	125
Cost of chaff cutter (₹.)	5000
Cost of equipment per animal (₹.)	1000
Insurance premium (% per annum)	3%
Veterinary aid/animal/ year (₹.)	1000
Cost of concentrate feed (₹./kg)	20
Cost of dry fodder (₹./kg)	5
Cost of green fodder (₹./kg)	2
Cost of electricity and water/animal/year (₹.)	300
Margin	15%
Rate of interest	12%
Repayment period (years)	5
Selling price of milk/litre (₹./litre)	36

## Lactation chart per animal

Year	I Batch		II Batch	
	Lactation days	Dry days	Lactation days	Dry days
1	240	30	90	0
2	240	120	210	150
3	210	150	240	120
4	210	150	270	90
5	210	150	270	90

## Feeding Schedule

Type of feed	Lactation			Dry	
	Price (₹)	Qty. (kg)	Cost Per Day (₹)	Qty. (kg)	Cost Per Day (₹)
Concentrate Feed	20	5	100	2	40
Green Fodder	2	25	50	20	40
Dry Fodder	5	4	20	5	25
<b>Total</b>			<b>170</b>		<b>105</b>



## 7. Project Cost

Capital Cost	Amt. (₹)
Cost of animals	120000
Transportation cost	2000
Construction of animal shed	12500
Construction of calf shed	5000
Chaff cutter/Equipment	5000
Total	139500
Working Capital	
Avg. Feed (1 month)	4938
Avg. Vety. Aid / Elect./Misc.(1 month)	217
Insurance	3600
Total	8754
Grand Total	148254
<b>Project Cost (Say)</b>	<b>149000</b>
<b>Margin</b>	<b>22000</b>
<b>Bank Loan</b>	<b>127000</b>

## Project at a glance

1	Unit Size	2 Animals
2	Breed	Graded Murrah Buffalo
3	Unit Cost (₹)	149,000
4	Bank Loan (₹)	127,000
5	Margin Money (₹)	22,000
6	Repayment period	5
7	Interest rate (%)	12%
8	BCR at 15% DF	1.13
9	NPW at 15% DF (₹)	61,035
10	IRR (%)	50%

## 8. Financing Agencies

i)	Names of the Implementing Bank	Madhyanchal Gramin Bank, SBI, UBI, Bank of Baroda.
ii)	Branch network of implementing block involved in implementation of the ADS	04 branches of MGB and 10 branches of CBs in the identified 2 blocks blocks.

## 9. Physical and financial programme

Physical and financial programme for the scheme is indicated below.

(₹ lakh)

Blocks	Name of the Bank	Unit Cost	No. of Units	TFO	Bank Loan	Margin
2	MGB, SBI. and BoB.	1.49	1000	1490.00	1270.00	220.00

The details are indicated in the Annexure.

## 10. Project Profitability

Amt. (₹)

Particulars	Years				
	1	2	3	4	5
<b>Benefit</b>					
Sale of Milk	118800	162000	162000	172800	172800
<b>Total</b>	<b>118800</b>	<b>162000</b>	<b>162000</b>	<b>172800</b>	<b>172800</b>
<b>Cost</b>					
Cost of feeding during Lactation	56100	76500	76500	81600	81600





Cost of feeding during dry period	3150	28350	28350	25200	25200
Veterinary aid and breeding charges	2000	2000	2000	2000	2000
Electricity and misc. charges	600	600	600	600	600
Insurance charges	3600	3600	3600	3600	3600
<b>Total</b>	<b>65450</b>	<b>111050</b>	<b>111050</b>	<b>113000</b>	<b>113000</b>
<b>Surplus</b>	<b>53350</b>	<b>50950</b>	<b>50950</b>	<b>59800</b>	<b>59800</b>

### 11. Financial Analysis

	1	2	3	4	5
Capital costs	139500				
Recurring costs	65450	111050	111050	113000	113000
Total Costs	204950	111050	111050	113000	113000
Benefit	118800	162000	162000	172800	172800
Net Benefit	-86150	50950	50950	59800	59800
Discoun Rate	15%				
PW Costs at 15%	455993				
PW of Benefits at 15%	517028				
NPW	61035				
BCR	1.13				
IRR	50%				

### 12. Sensitivity Analysis

Increase in total cost by 5%	215198	116603	116603	118650	118650
Decrease in total benefit by 5%	112860	153900	153900	164160	164160
Net Benefit	-102338	37298	37298	45510	45510
PW Costs at 15%	478,793				
PW of Benefits at 15%	491,177				
NPW	12,384				
BCR	1.03				
IRR	21%				

It may be observed that the project is insensitive to 5% increase in the cost accompanied by 5% decrease in the benefit as the IRR is still above 15%.

### 13. SWOT analysis

#### a. Strengths

- Good supplementary activity in the scheme area for doubling the farmers' income as the basic skill is already there.
- Availability of forward and backward linkages in the scheme area.
- Employment throughout the year and thus income.
- It will enhance the milk production and meet the requirement locally & efficiently.
- The people of locality can get quality milk and owner will get reasonable price for his products.
- Location is well connected to the city and has good transport facilities thus enable him to sell the milk at distant places.
- The proposed venture will provide employment throughout the year and thus act as a constant source of income.
- Well educated farmer will make use of extension work easily and implementation of innovative ideas could be achieved



**b. Weaknesses**

- Limited green fodder availability.
- Inadequate awareness among the farmers on scientific dairy farming
- Irregular power supply.
- Under developed milk collection system.
- Seasonal fluctuation in milk production.
- Absence of proper data base and records.

**c. Opportunities**

- Growing demand for milk due to increasing population and income.
- Possibility of value addition.
- Proximity to demand centres/markets.
- Direct selling co-operative without of middle man.
- Availability of good quantity of agricultural byproducts which can reduce the cost on feeding.
- Suitability of climate.

**d. Threats**

- Changes in Govt. policy leading to adverse procurement price.
- Weak monsoons that may adversely affect the milk production.
- High cost of credit.

**14. Repayment Period**

Year	Income	Expenses	Gross Surplus	Equated Annual Instalment	Net Surplus
1	118800	65,450	53,350	35,231	18,119
2	162000	111050	50,950	35,231	15,719
3	162000	111050	50,950	35,231	15,719
4	172800	113000	59,800	35,231	24,569
5	172800	113000	59,800	35,231	24,569

The loan of ₹1.27 lakh bearing interest @ 12% p.a can be repaid as per the above schedule in 5 years.

**15. Implementation and Monitoring**

- Initial approval in the DLCC meeting
- Block-wise allocation at BLBC meetings
- Review of the implementation in DLCC and BLBC meetings
- Involvement of stakeholders in review meetings for addressing issues and ensuring extension support services.

**16. Conclusion**

- It will improve the income streams of targeted beneficiaries.
- Create additional vocation for unemployed educated youth.
- It will open up avenues for value addition and thus would help to integrate small holder dairy production value chain.
- Reduce poverty and improve nutritional security.
- It will pave the way for commercial dairy.





## Area Development Schemes Goatary

### 1. Introduction

Ashok Nagar district is situated in the Zone 8 of Sub Agro Climatic Region, which comes under Regional Climatic Zone of Central Plateau of Madhya Pradesh. It has four blocks with a total geographical area of 4674 sq. km. constituting 1.52% of the total area of the State. The average rainfall of the district is 882 mm per annum which precipitates in about 70 days. The district population as per 2011 Census is 8.45 lakh with 6.91 lakh in rural areas. The total irrigated area as a percentage to net sown area is 59.54%.

As agriculture is major source of income in the district and farm credit has a vital role in realizing the objective of doubling of farmers' income by the year 2022. The GoMP has prepared district specific year wise road map for doubling of farmers' income starting from the year 2016-17. The total operational land holdings in the district were 145350 hectare, the area which cultivated more than once. There are ample number of population as agricultural labourers in the district, who depend on agriculture for their livelihood. Sixty one percent of the land holdings belong to Small and Marginal farmers (having holdings less than less than 2 ha). *Kharif* is the major cropping season with nearly 76% of gross cropped area. The major crops of the district are maize, soybean, cotton, paddy, blackgram and groundnut (kharif Season) and wheat and gram (rabi season). There is a growing demand for milk and it is gradually increasing.

The cultivation of crops, produced in the Ashoknagar, is heavily dependent on rainfall and the farm income is subjected vagaries of monsoon along with changing climate. In this context, considering the mission to double farmers' income by 2022, the significance of diversification cannot be overemphasized. In fact the GoMP in its roadmap to double farmers' income has enumerated a possible increase in income by 20% through agriculture diversification. Considering the skill set available with the local people and familiarity, activities relating to animal husbandry can be the most important aspect of diversification. Agriculture and allied activities constitute the single largest contributor to the Gross Domestic Product (GDP). In this regard, dairy farming, sheep and goat rearing and poultry production are considered most important as these sectors also play a significant role in supplementing family incomes and generating gainful employment in the rural sector, particularly, among the landless laborers, small and marginal farmers and women, besides providing cheap nutritional food to millions of people. Livestock are the best insurance against the vagaries of nature like drought, famine and other natural calamities. The livestock and biomass sector are supplemental and plays an important role in the social and economic development of rural areas by supplementing family incomes and generating gainful employment in the rural sector. Livestock is a rich source of high quality foods such as milk, poultry and egg, fish production, meat and meat products and a source for income and employment to millions of rural farmers, particularly women besides being an importance source of manure for crop production and fuel for domestic use. There is a growing demand for goat meat and it is gradually increasing. Type of animals reared by small sheep and goat farmers are generally local/ non-descript and mix desi goats with very lesser productivity.

### Objectives of Area Development Scheme

The Animal husbandry Sector plays an important and vital role in GSDP of Madhya Pradesh State, which is to the tune of nearly about 5.0%. This sector also contributes to product nutritive food, rich in animal protein, to the general public and good supplementary income to the economically weaker section of society like ST and SC, small farmers, marginal farmers and agricultural labourers. In addition, it offers a good employment generation opportunity, if adopted on a large commercial basis. A large number of rural women find good opportunities to work in several operations of livestock production. The main goal of formulation of Area Development Scheme (ADS) is as follows:

- Integrated and holistic development of the entire value chain associated with scientific goat rearing.
- To have proper networking/convergence/linkage of various development projects and support programs of all stake holders and partners in development so as to ensure maximum accrual of benefits to the ultimate beneficiaries from these support measures.
- To actualize increased investment credit flow to the sector for bringing out definite visible impact at the grass root level in terms of sustainable livelihood and income generation by the rural poor .
- Poverty alleviation, economic upliftment and empowerment in rural areas through capital formation and productive economic asset creation.

- Provide much needed support to the process for “Doubling Farmers’ Income by 2022” by allowing the primary producers being financed under a cluster based approach under ADS to federate them into producer collectives in terms of FPOs /FPCs so that economy of scale can be harnessed.

### **Justification for identifying Scientific Goat Rearing as part of the ADS**

The allied activities sector of goat rearing has a potential of providing good returns to the small and marginal farmers especially during the off season. There is good scope for financing goat rearing as an important IGA/ livelihood support measures for economic empowerment of poor women from rural households as part of various Central as well as State sponsored poverty alleviation programmes such as NRLM. It may be appreciated that SF/MF & Landless farmers/rural women have inherent aptitude for goat rearing as a routine allied activities in the tribal dominated hinterlands of the district. This is because of the following reasons:

- i. The initial investment needed for goat farming is relatively low.
- ii. In harsh climatic conditions and low fertility lands goat rearing can act as an insurance against natural disaster as the economic risk associated with goat rearing is much less compared to other livestock species.
- iii. Because of small body size and docile nature, housing requirement and management problems could be easily tackled.
- iv. Goats are prolific breeders and achieve sexual maturity at 10-12 months. Gestation period in goats is short and at the age of 16-17 months it starts giving milk. Twinning is very common whereas triplets and quadruplets are rare.
- v. Goats being ideal for mixed species grazing, can thrive well on wide variety of thorny bushes, weeds, crop residues, agricultural by-products unusable for human consumption.
- vi. Lastly, goat milk is easy to digest than cow milk because of small sized fat globules and has got a major role to play in improving appetite and digestive efficiency. Moreover, because of its non-allergic nature and inherent anti-fungal and anti-bacterial properties, goat milk can be used for treating large number of urogenital diseases prevalent amongst women folks in the region.

Keeping the aforementioned advantages in mind and in order to supplement the various poverty alleviation programs/ measures being initiated by the GoI, GoMP, NABARD has devised and formulated the Area Development Scheme (ADS) which aims at holistic development of the identified sector of Scientific Goat Rearing through effective implementation of the area based banking plans (ABBP). This entails close support and partnership of all stakeholders viz. target Farmers/SHG/JLG members, Dist. offices of veterinary services, RSETI-Ashoknagar, SBI-LDM Office, Dist. Coordinators of all important banks operating in the district i.e. CBs, MGB, Ashoknagar. The ABBP are basically cluster based single purpose small ticket project which can be utilized as tools by banks for purveying greater quantum of credit to this vulnerable groups for capital formation and asset creation.

The allied activities sector of dairy farming has potential of providing good returns to the small and marginal tribal farmers. There is also a good scope for financing dairy as an important IGA/ livelihood support measures for economic empowerment of poor women from rural households as part of various Central as well as State sponsored poverty alleviation programmes such as NRLM. It may be appreciated that SF/MF & Landless farmers/rural women have basic aptitude for rearing milch animals as a routine allied activities.

## **2. Forward & Backward Linkages**

### **Availability of Sheep/Goat/Pig and support systems**

Goat are reared mainly for their meat and milk. The district does not have descript breeds of sheep and goat. However, in the districts neighbouring Uttarpradesh and Rajasthan, goat breeds like Jamnapari, Barbari and Sirohi are reared. In other districts, it is mostly non descript breeds which are maintained.

### **Availability of veterinary infrastructure**

- It is understood that the o/o DD, Vety. Services Ashoknagar District has necessary technical support that is readily available in the identified blocks and further support can selectively be garnered from NGOs.
- District head quarter has 01 animal market and farmers have to procure animals from nearby districts.



- The GoMP is implementing credit linked subsidy scheme for breed improvement of local goats (10+1 units) and is extending subsidy @ 25% to general category (₹19364/-) and 50% to SC/ST beneficiaries (₹38728/-). Similarly breeding bucks are provided at a subsidy of 80% (₹6640/-) for all categories of goat farmers. In a road map for development of the sector during the coming years, State Government has proposed the following steps.
- Under breed improvement of goats programme it is proposed to distribute 1.35 lakh bucks from 2015-16 to 2024-25. Simultaneously 22000 units of 10+1 goat units shall be provided under bank finance during the same period.
- For animal insurance, subsidy at 50% and 70% is available for beneficiaries belonging to APL and BPL/SC/ST categories.

### Availability of feed and fodder

- As far as goat rearing is concerned, fodder availability is reasonable in the district. Grasses/tree leaves and shrubs can be easily collected by the farmers from the forest areas for feeding the small ruminants for its growth and development. Due to dwindling area of grazing land, there is a need to encourage semi-intensive system of sheep / goat rearing.
- Moreover, the identified species to be promoted under the ADS i.e. **Local Breed (with improved bucks of Jamnapari/Sirohi to improve the desi breeds) which is sturdy.** The variety can withstand the harsh summer months that prevails in the region as well as are disease resistant and have high feed to body mass conversion ratio. There is a need to promote concentrate feed and veterinary medicines shops/retail units in the district so that the potential agro-entrepreneurs can avail concentrate feed easily.

### Meat and associated goat product marketing infrastructure

Marketing infrastructure in the district in terms of organized sale of meat and mutton products is at an infantile stage. GoMP is promoting maintenance of proper health and hygiene of the animal to be slaughtered/slaughter house and of safe disposal of the animal viscera and other waste materials in a hygienic manner. The concerned line depts. needs to speed up the entire process for online registration as well as issue of the registration certificate to the prospective retailers.

### 3. Selection of Area

Based on the discussion with District Animal Husbandry Officer, LDM and bankers, 3 blocks i.e. Ashoknagar, Esagarh and Mungaoli have been identified for implementation of ADS on Goat farming for next five years. The identified panchayats/villages details are given below.

10 village panchayats from each block will be selected for the implementation of the ADS based on local preference, relatively better availability of fodder from the nearby forest and vegetative cover for sustenance of the goateries. Presently these villages are having pockets of experienced rural households in traditional goat farming have been selected and the banks/ branches have been identified as per the allocation of GP in the Service Area Plan.

### 4. Selection of Beneficiaries

- Beneficiaries will be identified with the help of NRLM, farmers Producer Company operating in the district and NGO partners who are implementing the NABARD projects in these blocks. SHG members will be identified at block and district level federations. There are 08 to 10 Farmers Producers Organizations (FPO) in various blocks in the district. Members of these producer company will also be identified with the help of these organizations.
- Once the beneficiaries are selected the same will be ratified in the DLCC as well as in the SHG Sub Committee of the DLCC. The ADS will be ratified and approved by the aforementioned bodies at the district level seeking consent of the identified banks. The approved scheme with associated Block-wise/Bank-wise /Branch-wise plan will be taken for discussion/approval /ratification by the respective BLBCs with the help of the LDM so that the Bank-wise and Branch-wise plans can be implemented smoothly.
- The NABARD, Regional Office, Bhopal as well as the District Coordinators of the various bank branches operating in the identified blocks will also be requested to take up the issue /matter with their ZO/Controlling Offices so that necessary official directives/notification can be issued for smooth implementation of the ADS.



## 5. Training and Capacity building of the beneficiaries

- DD, Vety. Services/KVK and RSETI will provide necessary training to the beneficiaries on scientific goat rearing. Besides goat rearing, the training will also cover aspects of scientific management of small ruminants/financial management/ project management/value chain management/ marketing aspects etc.
- LDM, bankers from the district as well as FLC coordinators from the MGB are proposed to be involved in providing training on aspects related to project formulation and submission to the banks seeking bank credit for scientific goat rearing.

## 6. Techno Economic Assumptions & Project Components

		No. of Bucks	1
		No. of Does	10
A.		Production Traits	
	i	Age at Maturity (Months)	10-11
	ii	Kidding interval (Months)	8
	iii	Kidding percentage	85%
	iv	Twinning percentage	60%
	v	No. of kiddings per year	1.5
	vi	Sex ratio	1:1
	vii	Mortality (%) Adults	5%
		Kids	15%
	viii	Saleable age of kids (months)	8-9
B.		Expenditure norms	
	i	Space requirement (st.per head)	
		Buck	20
		Doe	10
		Kids	4
	ii	Cost of construction (₹per sft)	180
	iii	Cost of equipment (₹.per adult animal)	20
	iv	a) Cost of green fodder cultivation (₹/acre/season)	3,000
		b) No. of acres	1
	v	Concentrate feed :	
		Adult does (one month before breeding and one month after kidding i.e. per kidding) (Kg./Month)	6.75
		Bucks (two months per breeding season) (Kg./Month)	7.5
		Kids (for 30 days) (Kg./Month)	3.75
	vi	Cost of conc. Feed (₹/kg)	10
	vii	Cost of does	4000
		Cost of Bucks	4500
	viii	Insurance (as percentage of the cost of breeding stock)	5%
	ix	Veterinary aid (₹/adult/year)	20
	x	Water, electricity and other misc. expenses (₹./adult)	20
C.		Income norms	
	i	Sale price of Bucklings (₹/kid)	3500
	ii	Sale price of Doelings (₹/kid)	3000
	iii	Value of closing stock - Does (₹/doe)	2500
	iv	Value of closing stock - Bucks (₹/doe)	3000
	v	Value of closing stock - Kids (₹/doe)	1500
D.		Repayment norms	
	i	Repayment period (years)	6
	ii	Grace Period (years)	1
	iii	Interest rate (%)	12%



### Herd chart

S.No	Particulars									
	Years	1	2	3	4	5	6			
	Kidding No.	I	II	III	IV	V	VI	VII	VIII	IX
A	Opening Stock - Adult bucks	1	1	1	1	1	1	1	1	1
	Adult Does Purchased stock	10	10	8	9	7	8	9	7	8
	Replaced stock	0	0	2	1	3	2	1	3	2
B	Births during the year									
	Male Kids	7	7	7	7	7	7	7	7	7
	Female Kids	7	7	7	7	7	7	7	7	7
C	Mortality									
	Adult does (5 %)	0	1	0	1	0	1	0	1	0
	Male kids (15 %)	1	1	1	1	1	1	1	1	1
	Female kids (15 %)	1	1	1	1	1	1	1	1	1
D	Sales during the year									
	Adult bucks	0	0	0	1	0	0	1	0	0
	Adult does	0	3	3	5	3	3	5	3	3
	Bucklings	0	0	6	6	6	6	6	6	6
	Doelings	0	6	6	6	6	6	6	6	6
E	Closing stock at the end of the year									
	Adult bucks	1	1	1	0	1	1	0	1	1
	Adult does	10	10	8	9	7	8	9	7	8
	Bucklings transfer	0	0	0	1	0	0	0	1	0
	Doelings transfer	0	0	2	1	3	2	1	3	2
	Male kids	0	5	5	5	5	5	5	5	5
	Female kids	0	5	5	5	5	5	5	5	5

### 7. Project cost for Goat (10 does+1 buck unit)

(Amount in ₹)

Sr.	Items	Specifications	Specification	Physical Units No.	Unit Cost (₹./Unit)	Total (₹.)
CAPITAL COST						
1	Shed (Thatch roof)	Does Area (Sq. feet/Animal)	10	10	180	18,000
		Buck Area (Sq. feet/Animal)	20	1	180	3,600
		Kids Area (Sq. feet/Animal)	4	14	180	10,080
					Total	31,680
2	Equipment	Feeding trough/Buckets etc.		11	20	220
3	Cost of Animals	Does		10	4000	40000
		Buck		1	4500	4500
			CAPITAL COST TOTAL=			76,400
RECURRING COST						
4	Insurance	Does	5%			2000
		Buck	5%			225
5	Veterinary aid			11	20	220
6	Fodder cultivation	0.33 ac per season & for 3 seasons		1	3,000	3,000



7	Supplementary	Does-6.75 kg/month for 3 months		10	10	2025
		Buck -7.5 kg/month for 3 months		1	10	225
		Kids -3.75 kg/month for one month		14	10	525
10	Water, electricity and other misc. expenses			11	20	220
				RECURRING COST=		8440
11	<b>TOTAL COST</b>			<b>Say</b>		<b>85,000</b>
12	Margin Money		20%			17000
13	Bank loan		80%	Say		68,000

## 8. Financing Agencies & Sources of finance

The ADS will be implemented over 3 Blocks i.e. Ashoknagar, Esagarh and Mungaoli with about a dozen panchayats each block. The bank branches operating in the identified blocks and having their service area in the selected panchayats have been considered for the purpose. Three major banks i.e. MGB, SBI and BoB will be extending finance for scientific goat rearing. The Unit Cost for Goat (10 doe + 1 buck) has been estimated at ₹85000/- of which bank loan will be ₹68000/- (80%) and balance ₹17000/- will be margin money. It may be mentioned here that under SHG lending there is no specific margin money concept. Over a period of 5 years the ADS will facilitate credit flow above ₹5.0 crore to 750 beneficiaries (SF/MF /landless) and the same is expected not only to improve term loan financing but also the income of the selected beneficiaries over the period of time.

## 9. Physical and financial programme

Bank-wise physical and financial programme for the 1<sup>st</sup> year (2018-19) has been indicated below:

Amount (₹ Lakh)

Year	No. of units	Unit cost	Total Financial Outlay	Margin	Bank loan
2018-19	300	0.85	255.00	38.25	216.75
2019-20	450	0.85	382.50	57.38	325.13
2020-21	550	0.85	467.50	70.13	397.38
2021-22	600	0.85	510.00	76.50	433.50
2022-23	650	0.85	552.50	82.88	469.63
<b>Total</b>	<b>2550</b>		<b>2167.50</b>	<b>325.125</b>	<b>1842.375</b>

The coverage of the ADS will be up scaled during subsequent years based on its success in terms of achievement, response of the banks and issues as may be found during periodic review at DLCC.

## 10. Project Profitability: -

Particulars	Years				
	1	2	3	4	5
<b>Benefit</b>					
Sale of Milk	118800	162000	162000	172800	172800
<b>Total</b>	<b>118800</b>	<b>162000</b>	<b>162000</b>	<b>172800</b>	<b>172800</b>
<b>Cost</b>					
Cost of feeding during Lactation	56100	76500	76500	81600	81600
Cost of feeding during dry period	3150	28350	28350	25200	25200
Veterinary aid and breeding charges	2000	2000	2000	2000	2000
Electricity and misc. charges	600	600	600	600	600
Insurance charges	3600	3600	3600	3600	3600
<b>Total</b>	<b>65450</b>	<b>111050</b>	<b>111050</b>	<b>113000</b>	<b>113000</b>
<b>Surplus</b>	<b>53350</b>	<b>50950</b>	<b>50950</b>	<b>59800</b>	<b>59800</b>





### 11. Financial Analysis

Sr. No.	Particulars	Years					
		I	II	III	IV	V	VI
I	Costs						
1	Capital cost *	76,400					
2	Recurring cost						
a)	Grreen fodder cultivation cost	3,000	3,000	3,000	3,000	3,000	3,000
b)	Feed cost						
	Bucks	225	225	225	225	225	225
	Does	2025	2025	2025	2025	2025	2025
	Kids	525	1050	525	1050	525	1050
c)	Medicines/Vet. charges	220	220	220	220	220	220
d)	Insurance	2225	2225	2225	2225	2225	2225
e)	Misc.(water/electricity charges)	220	220	220	220	220	220
	Total recurring expenses	8,440	8,965	8,440	8,965	8,440	8,965
	<b>Total costs</b>	<b>84,840</b>	<b>8,965</b>	<b>8,440</b>	<b>8,965</b>	<b>8,440</b>	<b>8,965</b>
II	Benefits						
a)	Sale of animals						
	Sale of adult Buck	0	0	1000	0	1000	0
	Sale of adult Doe	0	6000	5000	6000	5000	6000
	Sale of bucklings	0	21000	21000	42000	21000	42000
	Sale of doelings	0	36000	18000	36000	18000	36000
b)	Value of Closing Stock						97500
d)	Scrap value of shed and equip.						8362
	<b>Total benefits</b>	0	63000	45000	84000	45000	189862
	NET BNEFITS	-84,840	54,035	36,560	75,035	36,560	180,897
	PV cost at 15%	99,300					
	PV benefits at 15%	229,708		Disc. =	15%		
V	NPW at 15%	130,408					
V	BCR	2.31	:1				
VII	IRR	63%					

### 12. Sensitivity Analysis

The sensitivity analysis has been attempted for the goat rearing investment by assuming 5% increase in cost and 5% decrease in benefits. NPV, BCR and IRR have been worked out and details are given below. It may be observed that even with 5% increase in cost and 5% decrease in benefit the investment is viable.

Amount (₹)

Particulars	Years					
	I	II	III	IV	V	VI
Total cost (5% increase)	89082	9413	8862	9413	8862	9413
Total Benefit (5% decrease)	0	59850	42750	79800	42750	180369
Net benefit	-89082	50437	33888	70387	33888	170956
PV cost at 15%	104,265					
PV benefits at 15%	218,223					
NPW at 15%	113,958					
BCR	2.09	:1				
IRR	56%					



### 13. SWOT analysis

#### Strengths

- Good supplementary activity in the scheme area for doubling the farmers' income as the basic skill is already there.
- Availability of forward and backward linkages in the scheme area.
- Location is well connected and has good transport facilities.
- Employment throughout the year and thus income.

#### Weaknesses

- Limited green fodder availability.
- Inadequate awareness among the farmers on scientific dairy farming
- Irregular power supply.
- Under developed milk collection system.
- Seasonal fluctuation in milk production.
- Absence of proper data base and records.

#### Opportunities

- Growing demand for milk due to increasing population and income.
- Possibility of value addition.
- Proximity to demand centres/markets.
- Direct selling co-operative without of middle man.
- Availability of good quantity of agricultural byproducts which can reduce the cost on feeding.
- Suitability of climate.

#### Threats

- Changes in Govt. policy leading to adverse procurement price.
- Weak monsoons that may adversely affect the milk production.
- High cost of credit.

### 14. Repayment Period

The loan will be repaid in 6 years with initial one year is grace period, as under.

Bank loan : 68,000

Interest: 12%

(Amount in ₹)

Years	Income	Expenses	Gross surplus	Loan balance	Interest	Repayment		Net surplus
						Interest	Principal	
I	0	0	0	68000	8160	0	0	0
II	63000	8965	54035	76160	9139	9139	15000	29896
III	45000	8440	36560	61160	7339	7339	5000	24221
IV	84000	8965	75035	56160	6739	6739	20000	48296
V	45000	8440	36560	36160	4339	4339	20000	12221
VI	189862	8965	180897	16160	1939	1939	16160	162798

### 15. Implementation and Monitoring

#### 15.1. Implementation

The project will be implemented in close collaboration with the banks and SRLM will also be roped in in identifying prospective entrepreneurs. The following strategies will be initiated for achieving the set objectives:

- Providing training and entrepreneurial support to the interested beneficiaries as may be identified by the Dept. and SRLM.
- Arranging exposure visits to the units of progressive animal rearers.
- Providing credit support to the identified beneficiaries and graded SHGs members.
- Facilitating backward linkage support measures and exploring the scope of convergence with various governmental schemes.
- Arranging technical support for ensuring production performance of local breeds.



- Providing support for sale of goat kids.

### **15.2 Lunching & Monitoring**

Once the ADS is approved in the DLCC it shall be formally launched after due consultation amongst participating banks, Department, SRLM and RSETI.

- Initial approval of DLCC and Launching of ADP
- Ratification of banking plan at DLCC and BLBC meetings
- Review and monitoring of the implementation in DCC and BLBC on a quarterly basis.
- Involvement of stakeholders in review meetings to sort out issues relating to credit, extension backward and forward linkages.

### **16 Conclusion: -**

Area development scheme for scientific goat rearing in the identified blocks of district will facilitate the followings:

- i. Poor tribal people who are traditionally engaged in goat rearing since generations, will have access to the knowledge about scientific goat rearing practices, the entrepreneurial skill for running the activity in a business mode and will be take the activity as a feasible business option.
- ii. SF/MF/landless farmers will have access to formal banking system for meeting their credit need.
- iii. The pockets /panchayats identified will develop into major goat rearing clusters over a period of time and will open up scope for further investment and attract steady market linkage. In the process a kind of the additional income/income insurance can be achieved.

The ADS on scientific goat rearing can be a game changer in the rural economy of the Panchayats/Villages identified for coverage under the project. Demand for goat meat is very high and it is increasing. Based on the response and success of the ADS in identified blocks, the ADS models can be replicated in other parts of the district/State for the benefit of SF/MF and landless labourers.

Once the supply base is established, the goat farmers can be united in terms of FPO and subsequently federated at the cluster level for direct marketing with distant markets such as like Mumbai, Delhi, Kolkata, Bangalore, Chennai, Hyderabad, Pune and other major cities across the country.



ADS 2018-23  
Ashok Nagar (MP)

### District Development Managers (DDMs) of NABARD – M.P. Regional Office

District Development Managers (DDMs) & DDM(R) & Tem CPD of NABARD, Madhya Pradesh Regional Office						
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राष्ट्रीय कृषि और ग्रामीण विकास बैंक

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