



Inventory of Agriculture 2015



DIMAPUR DISTRICT

Inventory of Agriculture

2015



ICAR - Agricultural Technology Application Research Institute, Umiam (Barapani)
Ri- Bhoi District, Meghalaya - 793103



Correct Citation: Bhalerao A.K., Kumar B., Singha A. K., Jat P.C., Bordoloi, R., Deka Bidyut C., 2015, Dimapur district inventory of Agriculture, ICAR-Agricultural Technology Application Research Institute, Umiam, Meghalaya, India

Published by: The Director,
ICAR-Agricultural Technology Application Research
Institute, Umiam (Barapani), Meghalaya-793103
Email: icarzcu3@gmail.com
Website: <http://icarzcu3.gov.in>
Phone no. 0364-2570081

Compiled by: Dr. Anamika Sharma, Programme Coordinator
Shri. Rabi Kolom, SMS (Plant Breeding)
Shri. Z. James Kikon, SMS (Soil Science)
Shri. Pynshailang Mawthoh, Programme Assistant
(Computer Applications)
Dr. Ratnakar S. Patel, Lab. Assistant

Edited by: Amol K. Bhalerao, Scientist (AE)
Bagish Kumar, Scientist (AE)
A. K. Singha, Pr. Scientist (AE)
P. C. Jat, Sr. Scientist (Agro)
R. Bordoloi, Pr. Scientist (AE)
Bidyut C. Deka, Director, ATARI Umiam

Contact: Dr. Anamika Sharma (Programme coordinator)
Krishi Vigyan Kendra Dimapur,
ICAR Research Complex for NEH Region,
Nagaland Centre, Jharnapani,
Medziphema-797106, Nagaland
Telephone Number: 03862-247133
Mobile Number: +919436433005
Website of KVK: www.kvkdimapur.nic.in

Word Processing: Synshai Jana

Cover Design: Johannes Wahlang

Layout and Printing: Technical Cell, ICAR-ATARI, Umiam

FOREWORD

The ICAR-Agricultural Technology Application Research institute, Zone-III with its headquarters at Umiam, Meghalaya is primarily responsible for monitoring and reviewing of technology assessment, refinement, demonstrations, training programmes and other extension activities conducted by the *Krishi Vigyan Kendras* (KVKs) in North East Region, which comprises of eight states, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. The directorate also serves as feedback mechanism to research and extension systems while maintaining a very close liaison with ICAR headquarters and has made significant progress in research, capacity building and other extension activities which ultimately contributes for the planned growth and development of North Eastern Region of India.

Through this District Agriculture Inventory publication, an attempt has been made to compile and publish information about KVK district and agriculture in district, in a meaningful and comprehensive manner. It will be very useful for all stakeholders of agriculture in district. The inventory encompasses the information regarding geography of district; basic data about agriculture and district population, crops, institutional resources, agriculture relates schemes in district which also covers agriculture, fishery and livestock sector. The district inventory in the form of e-publication will surely increase the digital presence and penetration of KVKs. The inventory will also serve the communication needs of farmers and youth in district as it contains contact numbers and address related information to access various developmental agencies in district.

I congratulate the efforts of staff of KVK for collecting and compiling such a large volume of information in systematic manner. I also acknowledge the efforts of editors and other staff members of this institute for publishing this document on our website.

Umiam
18-03-2016

(Dr. Bidyut C. Deka)
Director,
ICAR-ATARI-Umiam,
Meghalaya-793103

PREFACE

The synthesized compilation in the form of informative publication is of much value for decision making. The compiled information in this publication will immensely help farmers and other stakeholders of agriculture and allied sector of a district such as line departments, research organizations, planners, policy makers, input providers etc. Through this document, we are trying to provide entire gamut of information related to district and its agriculture setting for the benefit of farming community of the North Eastern Region. The connectivity related issues in the North Eastern region makes the information inaccessible to most of stakeholders. Therefore, the *Krishi Vigyan Kendras* in each district of North East region undertook this cumbersome task to compile the district Agricultural Inventory. This publication provides the latest information about district, agriculture and other essential constituents.

We, the editors of this publication, earnestly thank and acknowledge the contribution of all compilers i.e. Programme coordinator, Subject Matter Specialists and Programme Assistants of KVK Dimapur for taking part in compiling the huge information to shape up Dimapur District Inventory of Agriculture-2015. We also thank all officers of ICAR H.Q. for guiding us time to time and motivating us to complete this publication.

We, the editors, dedicate this publication to the farming community of Dimapur District and we look forward to contribute more for the betterment of farming community in entire North East Region. We also welcome the suggestions for further improvement.

Umiam
18-03-2016

Editors



In the present manuscript we have tried to list all the resources required by the farmers in production process. Here we are listing the physical as well cultural aspects of people of the Dimapur. Natural and human resources are the primary resources essential for production of goods and services.

Agriculture is the backbone of our livelihood, while initiating and planning a programme in relation to Agricultural development 'Resource Inventory' plays a vital role. Resources of a particular place are the physical or vital entities of limited availability that helps one to earn livelihood. Inventory includes a list of articles, goods and materials available in the stock at a particular period of time. Therefore, resource inventory can be defined as "List of contents of a physical or virtual entity required for production of goods having economics values." There are three characters of resources: Quality, Utility, and Availability.

Value is the outcome of these characteristics. The value and importance of resources depend upon its need, level of technology available in hand and time factor. The three major resources are Natural, Human and Process resources. Natural resources are either related to biosphere or biotic; because of the association of non-living things (articles and various materials). Human beings also play an important role in development of skills of the rural poor as they have ability to increase the value of the materials. Processes are to convert the resources into final products which are also treated as a great resource.

Dimapur is the district of Nagaland established in December 1997 and lies between 25°48' and 26°00' North latitude and 93°30' and 93°54' East longitude. The altitude of district ranges from 160 - 350 meters above the mean sea level. The district is bounded by Kohima in East, Peren in South, Karbi Anglong district of Assam in the West and Golaghat district of Assam in the North. The district comprises of 4 (four) blocks and 11 agricultural circles with an area of 927 Sq. km. Dimapur town is the commercial hub of the state and is the magnet around which the economic and developmental activities of the district are centred; it is one of the fastest developing

townships of the North East. The town is also a gateway to Nagaland and Manipur state. It is important rail head and also has airport. The National Highway 39 that connects Kohima, Imphal and Myanmar border of Moreh runs through Dimapur District.

The total population of the district as per 2011 census is 3, 79,769. The district has a heterogeneous population with majority comprising of Naga tribes from all over Nagaland. There is sizable population of non-tribal living in the town areas. In addition, there is sizeable rural population in the Sub-division of Niuland, Kuhuboto, Dhansiripar and Medziphema blocks. The Niuland, Kuhuboto blocks are dominated by Sumi tribe, and Dhansiripar by different group of people like Chakesang, Sumi, Angami, Nepalese, Amalumba, Ao etc. Medziphema sub division is dominated by Angamis. The main factor contributing to large increase in population of the district is migration from other parts of state.

Agriculture in Dimapur is rainfed. Dimapur district has warm humid climate, soil type is loamy to sandy loam mostly agricultural practices are concentrated in the jhum and plain areas of the district. A portion of Medziphema block is hilly where jhuming is practice. The major crops grown under jhum are Paddy, Maize, Colocassia, Chillies, French beans, Cucumber etc. Nearly 800ha area is covered under pineapple cultivation. Other fruits trees like Guava, Banana, Citrus, Papaya and Litchi find the place in the kitchen gardens of the Nagas. In the plains the major crop is Paddy nearly 11% area is under double cropping. The other crops grown are Maize, Mustard, Linseed, Pea, Beans, all type of vegetables, Tapioca, Banana, Jackfruit, Papaya, Mango, Arecanut, Guava etc. Dimapur district has lots of marshy land that could be converted into ponds and there is a great scope for fish farming. Backyard Poultry and Piggery is very common in the district. Farm mechanization is very limited among the farm machineries used in the field are tractors and power tillers, ploughing by bullock is the common practice being followed by cultivators (Bangladeshi, Nepali, Manipuri, Karbi migrants). Shared cropping with cultivators is very common in Dimapur where 50% share is being distributed between the land owner and the cultivator.

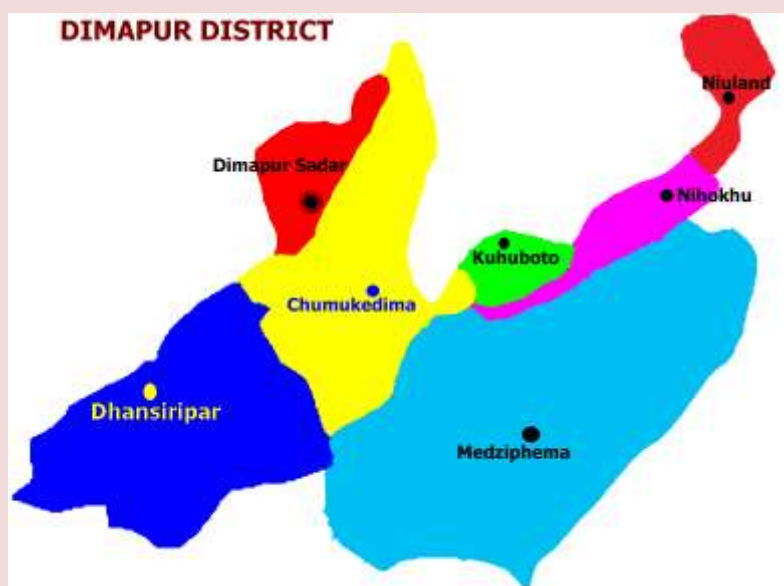
(Anamika Sharma)

TABLE OF CONTENT

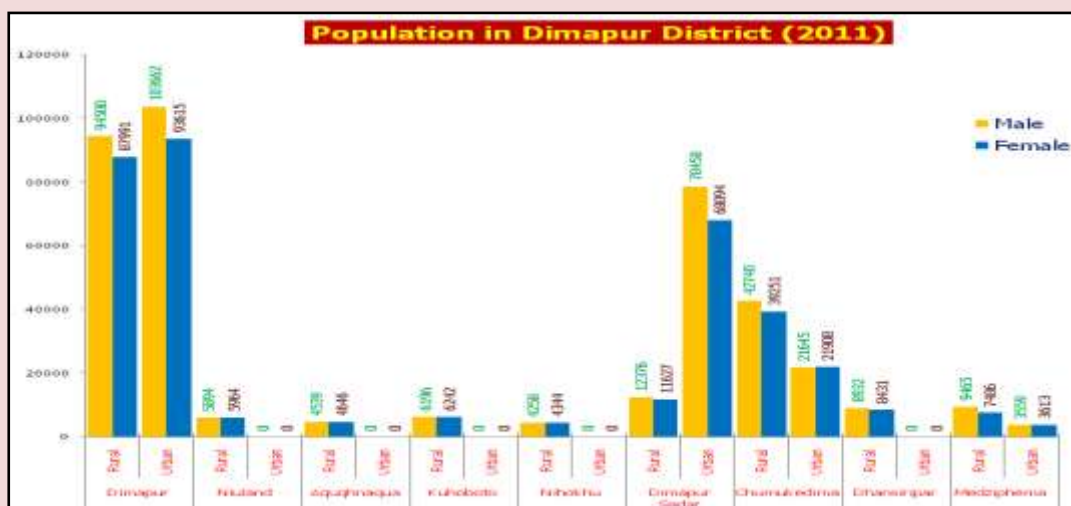
Chapter-i. District in general	9
chapter.ii. Economic scenario of the district	24
chapter-iii. Constraints in agricultural production.....	42
chapter-iv. Institutional support for agriculture development	48
chapter-v. Research and development organizations relevant to district's agriculture	71
chapter-vi. Plan and schemes for development of agriculture	79
chapter-viii. Annexure.....	93

CHAPTER-I. DISTRICT IN GENERAL

Dimapur is the 8th district of Nagaland established on December 1997 and lies between 25°48' and 26°00' North latitude and 93°30' and 93°54' East longitude. The district is bounded by Assam on its North and West, Kohima on the East and Peren District in the South. The district comprises of four blocks, 2 sadars and two circles with an area of 927 Square kilometres. Medziphema block has a total area of 345 sq. km with 67 revenue villages. Likewise, Dhansiripar block is spread over 130 sq. km area with 28 revenue villages; Niuland block has a total area 305 sq. km approximately with 59 revenue villages whereas Kuhuboto block has a total area of 147 sq. km with a total of 38 revenue villages.



Dimapur District is the most populous District in Nagaland, with a total population of 3, 79,769. The proportion of its population to the State population was 19.17%. Dimapur district has shown a decline in rural male residents by 9% and increase by 27.96% in female population during the last decade.



Dimapur district population during 2011

There is sizable population of non-tribal living in the town areas. Although notified town of Dimapur district has remained the same, the neighbouring villages /settlement have expanded considerably over the years merging with town boundary to form a length of more than 13 km. In addition, there is sizeable rural population in the Sub-division of Niuland, Kuhuboto, Dhansiripar and Medziphema blocks. The Niuland, Kuhuboto blocks are dominated by Sema tribe, and Dhansiripar by different group of people like Chakesang, Sema, Angami, Nepalese, Amalumba, Ao etc. Medziphema sub division is dominated by Angamis. The main factor contributing to large increase in population of the district is migration from other parts of state. There is also considerable migration from Assam.

Dimapur town is the commercial hub of the state and is the magnet around which the economic and developmental activities of the district are centred; it is one of the fastest developing townships of the North East. The business of the town can trace their history to British times. The town is also a gateway to Nagaland and Manipur state. It is important rail head and also has airport. The National Highway 39 that connects Kohima, Imphal and Myanmar border of Moreh runs through Dimapur District.

The district being in the assured high rainfall zone, the lands are sufficiently irrigated through natural precipitation and perennial streams. Dhansiri and Diphu are two major rivers flowing through district. A number of other rivers like Langlong, Amaluma flow down from Jalukie hills in the Dhansiripar/ Chumukedima plains. However, none of them are navigable. The district is blessed with numerous

perennial sources consist of the tributary network of Chathe River, Zubza River, Diphu and Dhansiri River. These sources could also be harnessed for irrigation purpose

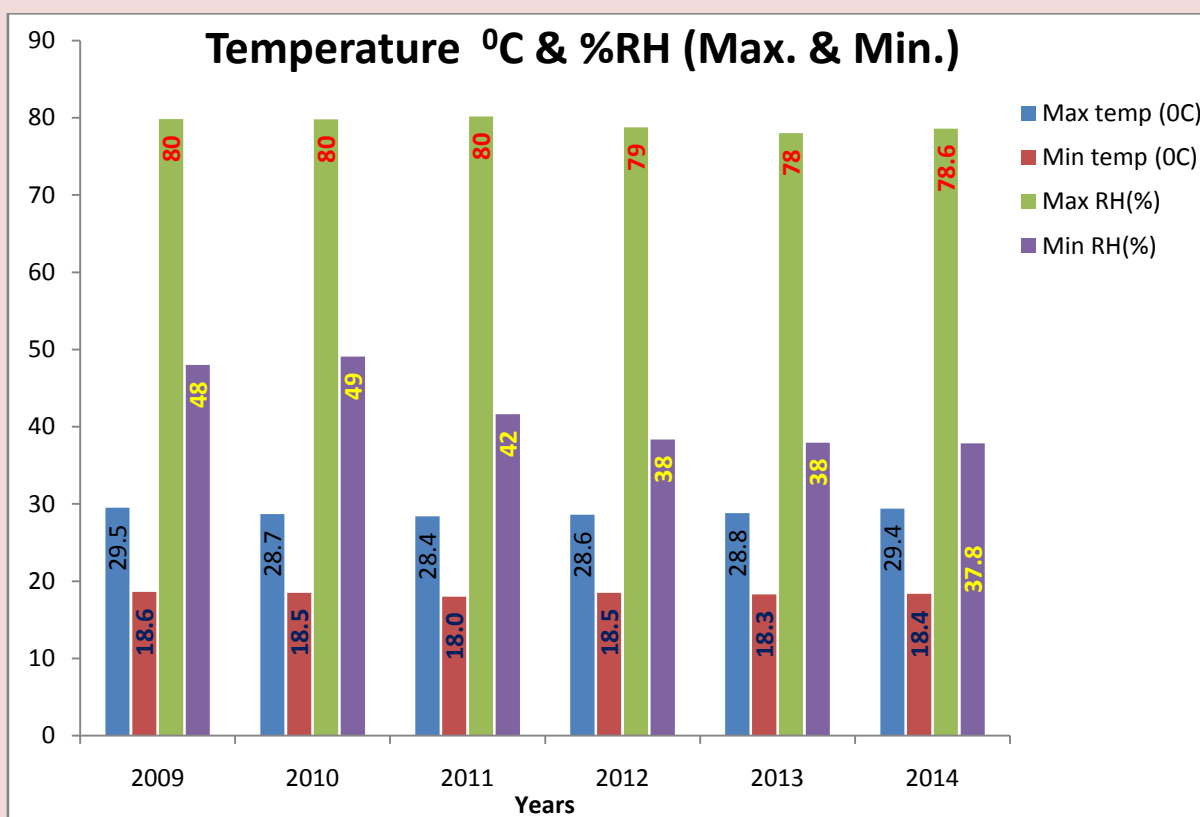
Farming population in Dimapur is nearly 46%. Agriculture in the district is rainfed. Total cultivable area is 61, 197 ha, cultivated area is 53,710 ha out of which irrigated and rainfed area is 32,800 ha and 20,910 ha, respectively. By and large mono-cropping is practiced in the district. Under agricultural crops cereals (Paddy, Maize, Millets), pulses (Arhar, Pea, Lentil, Gram, Naga Dal, Beans, Rajmas), oil seeds (Mustard, Soybean, Sesame, Sunflower, Groundnut) are major one. Under commercial crops sugarcane, jute, potato, ginger, tea, cardamom are common whereas leafy vegetables, Colocasia, Tomato, Chilly, Cauliflower, Turmeric, Black pepper, Okra etc. and fruits like Lemon, Pineapple, Orange, Litchi, Banana, Papaya, Pomelo etc. are the common horticultural crops. Besides these cattle, buffalo, pig, backyard poultry, duck, goat and rabbit are important livestock of the district. Apart from that Dimapur district has potential in fishery development in dams, rivers, ponds and small lakes, which is under progress in different areas.

CLIMATE

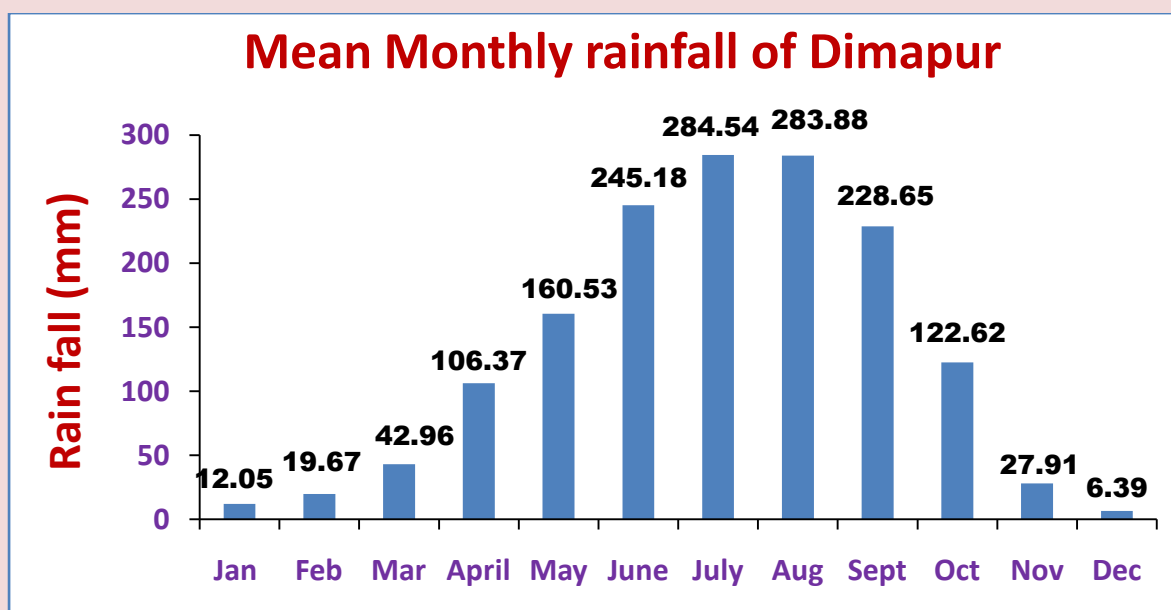
Dimapur district falls under humid Subtropical Agro climate Zone (ACZ) in summer it is hot and humid and moderately cold in winter. The district receives rains in two spells- South-West monsoon in summer and Northeast monsoon in winter. The South-West monsoon sets normally in the first week of May and extent up to October and the North-East monsoon normally sets in the month of November and extent till December. The major shares of the rains were received during June to August. The average rainfall is about 1000mm-1500mm and annual maximum temperature is 26⁰C and minimum temperature is 21⁰C. The details of climate are given in Table.

**Table: Temperature, RH and Rain fall recorded at ICAR Research Complex for
NEH Region, Jharnapani for the year 2014**

Month	Temp (°C)		RH (%)		Rainfall (mm)	Rainy days
	Max	Min	Max	Min		
January	23.9	9.2	73	22	0	0
February	25.3	10.1	74	23	26	3
March	29.4	14	77	17	33.9	4
April	32.5	18.2	72	23	41.2	5
May	32.4	22	76	41	137.6	8
June	33	24.8	81	55	114.5	9
July	32	25.4	83	62	311.5	18
August	31.1	25.2	83	63	269.9	18
September	30.8	24.1	85	60	149.5	12
October	30.2	21	83	47	89.4	3
November	27.6	15.6	80	27	0	0
December	24.7	10.8	76	14	4.8	1
Total	352.9	220.4	943	454	1178.3	81
Average	29.4	18.4	78.6	37.8	98.2	6.8



Mean Temperature (°C Maximum and Minimum) and Relative humidity (% Maximum and Minimum) for the last five years (2009-14)



Mean monthly rainfall for the last five years (2009-14)

TOPOGRAPHY

Dimapur district lies between 25°48' and 26°00' North latitude and 93°30' and 93°54' East longitude. The altitude of district ranges from 160 - 350 meters above

the mean sea level. The district is bounded by Assam on its North and West, Kohima on the East and Peren District in the South.

The district comprises of four blocks, 2 sadars and two circles with an area of 927 Square kilometres. Medziphema block has a total area of 345 sq. km with 67 revenue villages. Likewise, Dhansiripar block is spread over 130 sq. km area with 28 revenue villages; Niuland block has a total area 305 sq. km approximately with 59 revenue villages whereas Kuhuboto block has a total area of 147 sq. km with a total of 38 revenue villages. Major portions of Dimapur district lies in plain sector except Medziphema block. The plain sector consist of 3 blocks namely Dhansiripar, Niuland, and Kuhuboto having identical topography where as Medziphema blocks lies at higher altitude.

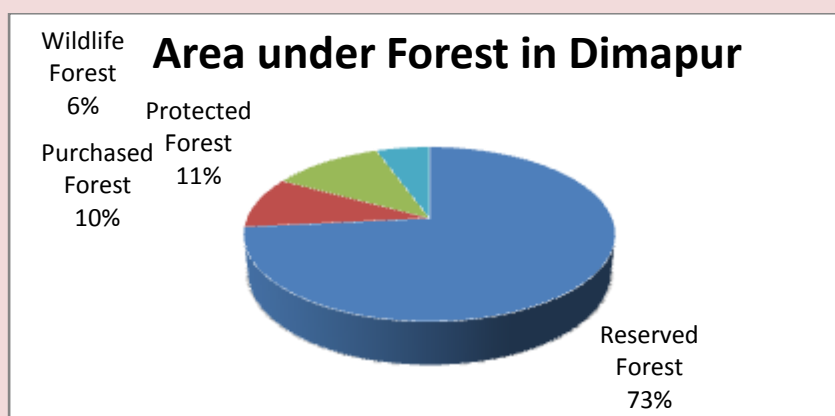
FOREST

Before the state of Nagaland was separated from Assam, Dimapur Forest division was under Dhansiri valley forest division of Assam till the constitution of Naga Hills, separated from Assam in the year 1958 along with Tuensang and Mon area (NEFA). There is no Forest division worth name in Naga Hills except few Forest Offices viz. Rangapahar Range with Beat Offices under range at Dimapur and Nichugard (Chumukedima). Dimapur forest division as Kohima forest division came into being headed by a Deputy conservator of Forest with headquarter at Dimapur along with the creation of a new unit called Naga Hills Tuensang Area (NHTA) in the year 1961.

The then Kohima forest division covers the present district of Kohima , Peren, Mokokchung, Zunheboto, Wokha, and part of Tuensang, Mon, Longlen and Kiphire with its range and Beat Offices at Rangapahar , Kohima, Nichgard (Chumukdema), Mokokchung and Naganimora for managing the reserved forests viz. Rangapahar R.F. , Singphan R.F. and Intangki R.F.

Table : Area under Forest (Area in Hectares) 2013-14

SL. NO.	Distri ct	Reserv ed Forest	Purchas ed Forest	Protect ed Forest	Degrad ed Forest	Wildlif e Forest	Nation al Park	Total Forest
1	2	3	4	5	6	7	8	9
1	Dima pur	6226.00	812.38	973.18		470.00	-	7508.38
Total		6226.00	812.38	973.18		470.00	-	7508.38



Area under forest in Dimapur district

(Source: Statistical hand book of Nagaland 2014)

WATER RESOURCES

The district being in the assured high rainfall zone, the lands are sufficiently irrigated through natural precipitation and perennial streams. Dhansiri and Diphu are two major rivers flowing through district. A number of other rivers like Langlong, Amaluma flow down from Jalukie hills in the Dhansiripar/ Chumukedima plains. However, none of them are navigable. The district is blessed with numerous perennial sources consist of the tributary network of Chathe River, Zubza River, Diphu and Dhansiri River. These sources could also be harnessed for irrigation purpose.

i. Rivers: Nil

ii.Streams: Nil

iii. Beels/ lakes: Nil

DEMOGRAPHY

Dimapur District is the most populous District in Nagaland, with a total population of 3, 79,769. The proportion of its population to the State population was 19.17%. Dimapur district has shown a decline in rural male residents by 9% and increase by 27.96% in female population during the last decade.

Table: Demographic over View of Dimapur district

DIMAPUR DISTRICT PROFILE AT A GLANCE	
Total geographic area	927 sq. Km(92700 ha)
Location	25 ⁰ 48' & 26 ⁰ 00'North latitude and 93 ⁰ 30' & 93 ⁰ 54' east longitude
Number of villages	204
Number of households	28762
Population	308382
a) Male	166335
b) Female	142047
c) Male/female ratio	1.5:1
Density of population	332 per sq km
Literacy %	78.15%
a) Male	82.16%
b) Female	73.34
Climate	Subtropical
Temperature	10 ⁰ -40 ⁰ C
Soil pH	4.5-6.0
Rainfall	1500-2000 mm
Altitude	140-600 mt(ASL)
Major rivers	Dhansiri, Diphu, Chathe, Zubza

Table: Block wise Demographic data (4 rural blocks)

SI no.	Particulars		Dhansirip ar Block	Kuhubot o Block	Niuland Block	Medziphem a Block	Total
1	Geographical area (Sq. Km.)		130 (14.02%)	147 (15.85%)	305 (32.90%)	345 (37.21%)	927 (100%)
2	Population as per 2001 (C)		20322	20746	34086	105014	180168
3	Total house hold		4142	3182	7164	14274	28762
4	Land holding (ha)	Large*	663	255	2363	Nil	3281
		Medium **	1490	1050	1146	5281	8967
		Small***	1036	891	1863	4996	8786
		Marginal****	953	986	1791	3997	7727
5	Literacy (%)		77.60	78.00	77.00	80.00	78.15 %
6	Irrigated area (ha)		3274	4342	9746	15438	32800
7	Rainfed area (ha)		2858	3137	7230	7685	20910
8	Cultivated area(ha)		6132	7479	16976	23123	53710
9	Cultivable area(ha)		7632	8987	18938	25640	61197
10	Forest area (ha)		4653	4934	10182	8031	27800

***10ha and above – Large, ** 5ha to 10ha – Medium, *** 2ha to 5ha – Small**

****** Below 2ha – Marginal**

Traditional, cultural and social identity of district

The name Dimapur comes from the Kachari dialect. Etymologically **di** means "river", **ma** means "big" and **pur** means "city"; in effect, the name means "the city near the great river." The Kachari tribe did not have a name for this city, though the Ahoms

called it Che-din-chi-pen, or "the brick city". It was also called Che-dima, meaning "city on the Dima River" and it was once the ancient capital of 13th century Kachari rulers. "Dimapur" is a later appellation.

The ancient Kachari capital Dimapur is one of the important sites of the megalithic culture. Most of the ruins appear to be contemporise with the Kachari civilization, established before the Ahom invasion in the 13th century A.D. There is evidence of a touch of Hindu influence on most of them, though these are predominantly Non – Aryan, with elaborate rituals and the cult of fertility. Besides the monoliths the ancient Kachari capital Dimapur contains other ruins of temples, embankments and tanks.

Dimapur city, the major commercial hub in Nagaland, has a heterogeneous mix of people from all over India, and for which it is also known as "mini India." Besides the dominant Naga tribe who comprises about 50% of the city's population, other prominent groups include Bengalis, Assamese, Nepalese, Biharis, Marwaris, Punjabis and also Tamils and Keralites. In the last two decades, Tibetan traders have also settled in the city.

In Dhansiripahar sub division, the tribes inhabiting the area is predominantly Angami, Sumi, Kachari and Chakhesang while in Medziphema sub division, the Angami tribe is predominant although a few Kuki and Sumi villages are also found. In Kuhuboto and Niuland sub divisions, the Sumis are the predominant tribe inhabiting the areas. All these tribes have their own customary laws which dominate their social life. The Village Councils are the local bodies through which such customary laws are enacted. The norms and traditions regarding marriage, divorce, inheritance, death etc are governed by such customary laws. Disputes regarding land, water and such resources and even personal disputes are very often resolved based on these customary laws.

In Dimapur district, all these tribes also celebrate their own indigenous cultural festivals. The following is a brief write up on the festivals of the major tribes that inhabit the district: The **Angami** tribe celebrates **Sekrenyi** in the month of February. It normally falls on the 25th day of the Angami month of Kezei. The ten-day festival is also called Phousanyi by the Angami's. The festivals follows a circle of ritual and ceremony, the first being "Kizie" followed by "Dsuseva" (touching the sleeping water) sacrifices are also made during this time. **Ahuna** is a traditional post harvest festival of the **Sumi** tribe. Ahuna signifies the celebration of the seasons harvest's in thanks

giving, while evoking the spirits for good fortune in the New Year **Tuluni** is a festival of great significance. The festival is marked with feast as the occasion occurs in the bountiful season of the year.

It may be mentioned that other tribes who have settled in Dimapur also celebrate their festivals with as much pomp and gaiety. The **Ao** tribe observes **Moatsü Mong** after the sowing is done. It provides the Aos a period of recreation after the strenuous job. The festival marked by vigorous songs and dances merry making and fun is now observed only for three days from 1-3 May. The Aos have another festival called **Tsungrem Mong** celebrated on the eve of harvest from 1 to 3 August. These festivals provide opportunities to the building generation and village stalwart to demonstrate their intellectual skill and physical powers.

The **Tokhu Emong** is the harvest festival of the **Lothas**. Tokhu Emong is celebrated on November 7, every year. The main features of the feast are community songs, dances, feast fun and frolic. Tokhu Emong is also a festival of thanksgiving, sharing and reconciliation but the most beautiful aspect of this festival is that past rancor's are forgiven, new ties are formed and bonds of closer intimacy are formed.

The **Chakhesang** community celebrate the **Suhkruhnye** festival on 15th January which is their most important festival.

All the tribes celebrate their distinct seasonal festivals with much gaiety and community feasting. Most of these festivals revolve round agriculture, since it is the main-stay of Naga society. Over 85% population of Nagaland is directly dependent on agriculture and lives in a thousand and odd villages situated on high hill tops or slopes overlooking verdant valleys humming with murmuring streams.

Administrative setup

The first Deputy Commissioner of the district took over charge formerly on 2nd January 1998. The proposed head quarter for the district is Chumukedima but presently DC office is located in Dimapur town. The administrative setup is as follows:

 Deputy Commissioner, Dimapur

- ✚ A.D.C, Niuland
- ✚ A.D.C, Medziphema
- ✚ S.D.O (Civil), Medziphema
- ✚ S.D.O (Civil), Kuhuboto
- ✚ S.D.O (Civil), Dhansiripar
- ✚ E.A.C, Nihokhu
- ✚ E.A.C, Chumukdemia

Financial Institutions:

Different financial institutions like banks and Insurance companies are working in the district dealing with money transactions, promoting the agriculture in the districts by financing the loans to marginal and small farmers. The list is given below (in table).

Table

Sl no.	Name of Bank	No of Branches in Dimapur
1.	Allahabad Bank	2
2.	Axis Bank	3
3.	Bank of Baroda	1
4.	Bank of India	1
5.	Bank of Maharashtra	1
6.	Canara Bank	1
7.	Central Bank of India	1
8.	Federal Bank	1
9.	HDFC Bank	1
10.	ICICI Bank	2
11.	IDBI Bank	1
12.	Indian Bank	1
13.	Indusind Bank	1
14.	Punjab National Bank	1
15.	Punjab & Sind Bank	1
16.	State Bank of India	13
17.	South Indian Bank	1
18.	Syndicate Bank	1

19.	United Bank of India	2
20.	United Commercial Bank	4
21.	Union Bank of India	1
22.	Vijay Bank	2
23.	Yes Bank	1
24.	Nagaland Rural Bank	4
25.	Nagaland State Co- operative Bank	5
	Total	56

Agricultural marketing System:

Marketing of Agricultural produce is mainly done by weekly market, held at different places on different days in a week, i.e., local weekly markets. The farmers are selling their produce at lower prices prevailing in market. To promote the marketing of agricultural produce, Agricultural Produce Marketing Committee (APMC) has been proposed in the district. Under the supervision of APMC, Agricultural Produce Marketing Subcommittee and Village Market committee has been constituted. In Village market committee - one member of each farming house hold is member and one lady member of farming community is must. The office bearer will consist of Chairman, Secretary, Treasurer and Executive members. 10 APMSC has been proposed and 10 Sub Market Yards are also proposed. Two APMC is proposed one in Dimapur and other in Niuland. APMC will be affiliated with Nagaland Agricultural Marketing Board.

Table: Local Markets of Dimapur

Sl. No	Name of the block	Name of the Market	Periodicity (Weekly/Daily)	Important commodities handled	Commodity wise Quantity handled (Annual)	Area Covered	No. of farm families covered
1	Medziphema	Medziphema	Weekly	Cereals, Pulses, Oilseeds, Fruits & vegetables	All commodities	30 Villages	6,000
2	Dhansiripar	Doyapur	Weekly	-do-	-do-	20 villages	4,000
3	Niuland	Niuland	Weekly	-do-	-do-	35 Villages	7,000
4	Khuboto	Khuboto	Weekly	-do-	-do-	15 Villages	3,000

Source: SREP ATMA, Dimapur



Friday local market at Medziphema

Farmer's organization:

There are about 250 different Farmers Interest Group and about 700 different self help groups. Medziphema block alone is having around 204 SHGs. Agriculture Technology Management Agency (ATMA) for Dimapur district was started in the year 2005-2006. The Strategic research and Extension Plan for Dimapur district has been prepared and action on it has been initiated. There are 6 no. of farmer's club formed with the help of NABARD functioning for welfare of the farmers.

CHAPTER.II. ECONOMIC SCENARIO OF THE DISTRICT

The agriculture in the district is TRC, rainfed and traditional. By and large mono cropping of paddy is practiced in the district. The TRC paddy alone covers an area of 32,900 ha where as Jhum covers about 7,800 ha. Besides the second important crop in the district is Kharif, Maize covers about 2500ha. Maize is generally grown as an inter-crop with jhum paddy. Winter maize is also grown in certain blocks of the district which covers about 460 ha.

Important Pulses are also grown in the district include pea, lentil, black gram, beans, green gram, arhar; these are grown over an area of 1360 ha, in both Kharif and Rabi season.

With the favourable agro climatic condition, oilseeds such as groundnut, soybean, sesame, sunflower, mustard, linseed, etc. are grown in an area of 5800 ha. Commercially viable crops such as sugarcane, ginger, jute, turmeric, tea, potato etc are also grown in the district covering an area of 1,580 ha. Mechanized farming is encouraged, by providing 50% subsidy on power-tillers.

CROPS

a. Existing Agricultural farming systems - The farming in the district is a mixture of Jhum and TRC paddy followed by oilseed and cash crops. TRC paddy being main crop of the district is sown in May and harvested in last week of Nov. or first week of Dec followed by maize.

b. Cereals production system -The major cereal crops are grown in district is Paddy, maize, Bajra, Ragi, Wheat, Barley and Oat. With an annual production of 131040 MT with an area of 54490 hectares, this accounts about 19.17% of total state production. Dimapur district is called as “Rice bowl” of the state. The area under rice cultivation in the district is 24.87% against the total rice area (35520 hectares, *source: Directorate of Agriculture, Govt. of Nagaland*) of the state, with an annual productivity of 1.9 (Jhum paddy) and 2.62 (TRC) MT. While maize occupies 6730hectares, with the average productivity of 1.97 MT/ha grown in Kharif as well as in Rabi. Wheat is also grown in some pockets of district covering 390 hectares area with the productivity of 1.85MT /ha.

c. Wet Rice Cultivation –Wet rice cultivation is generally followed in valley or low land areas of the district. The land for wet rice cultivation is prepared by ploughing with bullocks and power tillers (only in medium and large land holdings). Irrigation is provided by construction of channels in some areas; through rainfall is the major source of irrigation. 25-30 days old seedlings of paddy are transplanted in June/ July. Application of fertilizers and pesticides is found to be negligible. However, use of fertilizers and pesticides are reported from the areas neighbouring Dimapur town.

d. Jhum Paddy – Jhum field, after cutting and burning the jungles, are ploughed manually with spade and seeds are broadcasted in the month of April- May after the onset of monsoon. Jhum paddy is harvested in the month of October.

e. Pulses production system- During 2013-2014, the district had total pulse production of 2490 MT from an area of 2480 hectares. Among the Pulses, the major are Pigeon pea, Green gram and Black gram. Beans are cultivated during Kharif whereas; pea, Lentil and Horse Gram are grown in Rabi season. Some of local Bean (Rice Bean) varieties are also cultivated in the district.

f. Oilseed production system- Soyabean, sesamum, and rapeseed/mustard are the predominant oilseed crops, widely cultivated by the farmers. The improved varieties of oilseeds are being cultivated by the farmers are: Soybean variety JS-335, groundnut var. ICGS-76, sesamum var. Till-1, sunflower var. Modern and Hybrid-21, mustard var. TS-38, M-27 and B-9, linseed J-23 and JLS-9. Sesamum is grown in Kharif in Jhum fields along with maize and in plain area (630ha) of districts. Soybean covering an area of 2040 ha is the major oilseed crop of district in kharif season.

Mustard and rapeseeds are generally cultivated as Rabi crop covering the maximum (4180 ha) area. Mustard is grown in Jhum fields as well as in TRC plots after harvest of paddy. Few farmers cultivate this crop at commercial scale and sell it in weekly markets. Linseed covers an area of 1100 ha after mustard

in Rabi season. Linseed is grown in late harvested paddy plots generally in December first week to third week. The oilseed production the district is recorded to be 8710 MT during 2013-14.

g. Cash crop production systems- Major cash crops of the district are sugarcane, potato, ginger, and vegetables. Sugarcane is sown in April in valley or plain areas of district after onset of monsoon and harvested in February. As Sugar Mill of the district is closed down, farmers are selling their produce in local markets and some of them are engaged in jiggery preparation. Ginger is the mostly grown in Jhum fields of Medziphema block. During 2013-14 the area under ginger was reported to be 169 ha; however 2006-07 the area under ginger cultivation were 970 ha only. The farmers of the district are discouraged for ginger cultivation due to soft-rot and bacterial wilt diseases.

Potato is cultivated in an area of 680 hectares with the average productivity of 10.044 MT q/ha due to lack of irrigation. The potato is attacked by red ants and market quality is reduced and farmers are not willing to apply chemicals to control the ants. These problems discourage the farmers for area expansion under potato.

Table: Farming systems in district

Farming system	Soils	Rainfall	Altitude	Principal crops /breeds	Important features	Location (area) extent of area in ha
Multi-cropping in Jhum fields	Loamy sand	1200 mm	250-350m MSL	Paddy , maize, Soybean, Ginger, pineapple,	A part of block is hilly terrain	Medziphema block; Area – 34,500 ha.
Mono-cropping as well as double cropping	Sandy clay loam	1000 mm	250 m MSL	Paddy , maize, Soybean, mustard, linseed, cabbage, cucurbits, black gram, Arhar	Valley or plain land	Dhansiripar block; Area- 13,000 ha

Mono-cropping as well as double cropping	Sandy clay loam	1000 mm	250 m MSL	Paddy , maize, Soybean, mustard, linseed, cabbage, tomato, cucurbits, black gram	Valley or plain land	Niuland block Area- 30,500 ha
Mono-cropping as well as double cropping	Sandy clay loam	1000 mm	250 m MSL	Paddy , maize, Soybean, mustard, linseed, cabbage, cucurbits, black gram	Valley or plain land	Kuhuboto block; Area- 14,700 ha

2. Land use pattern under the farming system

a. Mono cropping- This system of farming is generally followed in case of Wet Rice cultivation. Here paddy is the major crop, is cultivated in low land area of district almost in all the blocks. Some of farmers cultivate maize and ginger as mono-crops in their fields.

b. Mixed cropping – vegetables like beans and leafy vegetables along with soybean and Naga dal are cultivated in plain areas of districts. The summer vegetables like Okra and cucurbits are very common. Other vegetables for e.g. brinjal, chilli and tomato are grown in winter season. This farming system is followed in Niuland, Kuhuboto and Dhansiripar blocks of district.

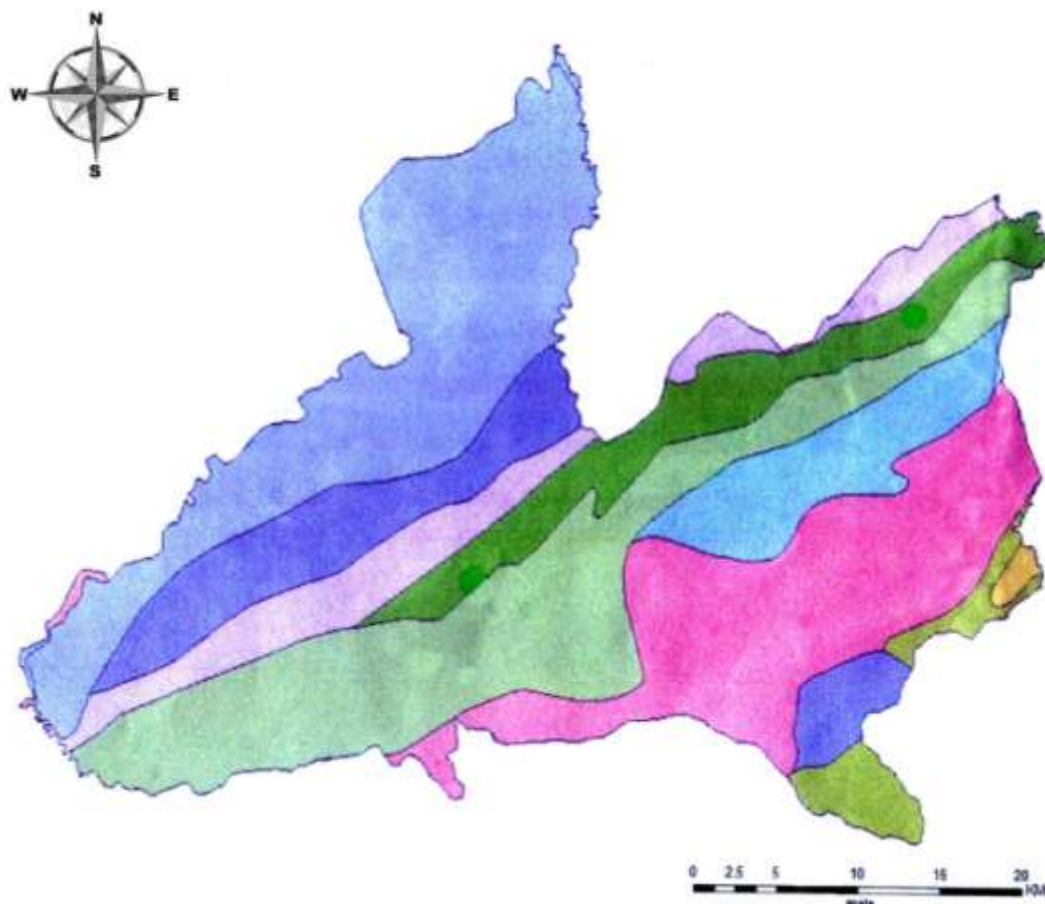
c. Double cropping – here paddy is the main crop followed by mustard or linseed as secondary crop. Sometimes winter maize is taken as second crop.

d. Multi-cropping farming system- this farming system is generally followed where Jhum paddy is cultivated on gentle slope of hills/ plains along with maize and colocasia, beans, brinjal, tomato, chilli, cucumber etc. TRC paddy is also grown followed by mustard /linseed or maize in December or January. This system is followed in whole district (4 blocks). Vegetables are also cultivated in the district in Jhum fields, on an area of 1049 hectares only.

e. Horticulture based farming system- Pineapple is grown on the slope of hills with colocasia and cucurbits as inter crop. King chilli is also grown in Jhum fields as inter crop. This system is followed in Medziphema block of district.

f. Soils under the farming system – The soils of district are dominantly of loamy sand and clay loam soil with pH ranging from 4.5 - 6.0. The total soluble salt is within normal limit. The organic carbon content is low-medium, available phosphorus is low-medium, available potassium is low-medium, magnesium is high, calcium is low, nitrate nitrogen is medium – high, sulphur is low-medium and ammonical nitrogen is low.

SOIL OF DIMAPUR DISTRICT



Legend

	Coarse-loamy, Typic Udorthents-Fine, Typic Dystrochrepts
	Fine, Typic Dystrochrepts-Loamy-skeletal, Pachic Haplumbrept
	Fine, Typic Kanhapludalfs-Fine-loamy, Umbric Dystrochrepts
	Fine, Typic Paleudults-Loamy-skeletal, Typic Dystrochrepts
	Fine, Umbric Dystrochrepts-Fine-loamy, Typic Udifluvents
	Fine-loamy, Typic Paleudalfs-Fine-loamy, Typic Dystrochrepts
	Fine-loamy, Typic Paleudults-Fine, Umbric Dystrochrepts
	Fine-loamy, Umbric Dystrochrepts-Fine, Typic Paleudults
	Fine-loamy, Umbric Dystrochrepts-Fine-loamy, Typic Udifluvents
	Loamy-skeletal, Umbric Dystrochrepts-Fine-loamy, Typic Dystrochrepts

Table: General Characteristic of Dimapur soils

S. No	Name of village	Altitude (Meter)	pH	E.C. (MMHOS/Cm)	O. C (%)	CEC (me/ 100g)	Avl. N (Kg/ha)	Avl. P (Kg/ha)	Avl. K (Kg/ha)	Zinc (ppm)	Copper (ppm)	Iron (ppm)	Mn (ppm)
1.	Zanei	190	4.7	0.25	0.86	14.0	392.0	8.9	151.2	1.46	2.18	112.20	151.60
2.	Khusiabil	180	4.6	0.30	0.87	17.6	420.0	11.2	123.2	1.16	2.44	130.00	148.10
3.	Durgajan	160	4.6	0.30	1.25	20.8	288.5	6.2	173.6	1.44	3.74	104.70	187.10
4.	Baman	190	4.3	0.22	0.85	12.4	329.3	6.7	100.8	1.81	2.52	112.70	87.20
5.	Tenyiphe	240	4.7	0.30	0.79	20.8	213.2	7.8	123.2	0.95	2.59	37.10	59.30
6.	Diphupar	150	4.1	0.25	0.72	9.0	282.2	21.3	84.0	2.14	2.02	142.90	16.70
7.	Diezephe	240	4.6	0.30	1.12	11.0	222.6	11.2	288.0	2.04	4.04	166.10	109.60
8.	Seithekiema	223	4.7	0.45	0.66	13.0	301.0	28.0	123.2	0.66	2.02	21.10	39.50
9.	Singirijan	152	4.9	0.30	0.82	13.0	417.1	11.2	100.6	0.86	2.46	141.40	96.30
10.	Chumukedima	180	4.6	0.25	0.90	12.4	316.7	6.7	145.6	1.20	2.54	129.50	8.72
11.	Dhansiripar	170	4.7	0.21	1.15	12.4	206.9	11.2	151.2	2.12	4.72	183.80	138.70
12.	Kukidolong	250	4.4	0.23	0.83	10.0	254.0	6.7	100.8	1.32	1.76	83.90	23.60
13.	Pherima	600	4.8	0.20	1.04	12.0	310.4	6.7	78.4	1.00	1.50	71.80	48.50
14.	Paglapahar	300	4.6	0.25	0.92	13.0	326.1	7.8	95.2	1.42	2.80	124.40	66.10
15.	Medziphema	340	4.6	0.15	1.21	11.0	254.0	7.8	84.0	0.34	1.12	79.40	10.10

16.	Piphema	900	4.7	0.30	1.28	17.6	326.1	7.8	106.4	0.98	1.78	91.80	43.70
17.	Shokhuvi	190	4.4	0.19	0.69	12.4	241.5	7.8	123.2	1.22	2.04	92.50	70.60
18.	Jharnapani	250	4.5	0.18	1.15	13.6	279.1	12.3	151.2	1.60	3.38	157.70	54.00
19.	Molvom	398	4.2	0.22	0.87	9.0	297.9	8.9	78.4	0.52	1.06	73.70	7.80
20.	Ruzhaphema	540	4.5	0.20	1.04	9.6	344.9	6.7	84.0	0.22	0.84	70.20	9.70
21.	Sirhima	400	4.6	0.23	1.19	13.6	335.5	7.8	123.2	1.06	2.36	112.40	59.30
22.	Socunoma	400	4.6	0.23	0.94	11.0	141.1	8.9	95.2	0.52	1.42	76.40	22.80
23.	Pimla	210	4.7	0.29	1.15	14.8	332.4	12.3	145.6	1.84	3.76	148.30	103.70
24.	Maova	362	4.6	0.25	1.07	11.0	495.5	14.5	89.6	0.40	1.16	84.10	27.20
25.	Khaibung	500	4.6	0.25	1.04	9.6	319.9	10.1	84.0	0.54	1.34	93.40	13.50
26.	Zuikhu	500	4.8	0.25	1.56	15.2	203.8	7.8	128.8	0.54	1.50	79.20	28.70
	Mean	297.8	4.6	0.25	0.97	13.2	297.1	10.1	123.0	1.20	2.39	107.10	67.94

Source: Directorate of Soil and Water conservation, Govt. of Nagaland, Kohima

3. Climates under Farming system:

The district of Dimapur falls under humid-Sub-Tropical Agro-climatic Zone (ACZ) and receives southwest monsoon rain during summer and north east monsoon during winter. The annual average rainfall is about 1000mm and annual average maximum temperature is 26°C and minimum temperature is 21°C. The highest one day temperature is 40°C and lowest one day temperature recorded is 10°C

Table: Area & Production of principal crops for the year 2013-14

	Crops	Area (Ha)	Production (MT)	Productivity (t/ha)
	<u>A. CEREALS</u>			
1.	Jhum Paddy	9450.00	17990.00	1.90
2.	TRC/WRC Paddy	37670.00	98810.00	2.62
3.	Maize	6730.00	13250.00	1.97
4.	Bajra	60.00	60.00	1.00
5.	Ragi	30.00	30.00	1.00
6.	Wheat	390.00	720.00	1.85
7.	Barley	90.00	100.00	1.11
8.	Oats	70.00	80.00	1.14
	Total	54490	131040	2.40
	<u>B. Pulses</u>			
1.	Tur/ Arhar	480.00	440.00	0.91
2.	Urd/ Mong	130.00	130.00	1.00
3.	Cow pea	200.00	290.00	1.45
4.	Horse gram	60.00	60.00	1.00
5.	Pea	890.00	970.00	1.08
6.	Lentil	470.00	380.00	0.80
7.	Gram	100.00	100.00	1.00
8.	Black Gram	150.00	120	0.80
	Total	2480.00	2490	1.00
	<u>C. Oil Seeds</u>			
1.	Ground nut	160	170	1.06
2.	Soyabean	2040	2520	1.23

3.	Castor	60	40	0.66
4.	Sesamun	630	400	0.63
5.	Sunflower	670	410	0.61
6.	Rape Seed/Mustard	4180	4260	1.02
7.	Linseed	1100	910	0.82
	Total	8850	8710	0.98
<u>D. Commercial Crop & Others</u>				
1.	Sugar Cane	1140	49630	43.53
2.	Cotton	70	-	-
3.	Tea (Green)	2890	12960	4.48
4.	Ramie	40	30	0.75
5.	Mesta	270	300	1.11
6.	Tapioca	120	2430	20.25
7.	Colocossia	240	2280	9.50
8.	Yam	100	720	7.20
	Total	6450	77270	11.97

4. Horticulture in Dimapur district

In Nagaland, fruits and vegetables are produced in 37479 and 51343 ha with the total production of 286920 MT and 605984MT respectively of which Dimapur district contributes major portion of production as 13.08% of fruits (37,541 MT) and 8.56 % of vegetables (51899MT). Commercial cultivation of pineapple, banana, cashew nut and lemon is also followed in the district. The Horticulture Technology Mission (HTM) has helped to a great extent in popularizing the cultivation of horticultural crops including floriculture.

Table: Major fruits during 2012-13

Sl. No	Crops	Area (Ha)	Production (MT)	Productivity (t/ha)
1.	Orange	100	1300	13.00
2.	Lemon	450	2984	6.63
3.	Pomelo	120	500	4.17

4.	Pomegranate	15	60	4.00
5.	Papaya	60	347	5.78
6.	Banana	360	4580	12.72
7.	Guava	30	150	5.00
8.	Mango	70	490	7.00
9.	Litchi	100	1000	10.00
10.	Jackfruit	35	100	2.86
11.	Pineapple	2550	25000	9.80
12.	Mosambi	20	160	8.00
13.	Ber	5	30	6.00
14.	others	140	840	6.00

Table: Major vegetables during 2013-14

Sl. No.	Crops	Area (Ha)	Production (MT)	Productivity (t/ha)
1.	Sweet Potato	126	1957	15.53
2.	Cabbage	723	14595	20.19
3.	Cauliflower	108	710	6.57
4.	Brinjal	48	429	8.94
5.	Chilly	472	3313	7.02
6.	Peas	316	2227	7.04
7.	Bean	203	1280	6.30
8.	Bhindi/Okara	23	211	9.17
9.	Tomato	290	1754	6.05
10.	Ginger	169	3197	18.91
11.	Garlic	20	215	10.75
12.	Radish	52	664	12.77
13.	Colocassia	260	2080	8.00
14.	Tapioca	468	8500	18.16
15.	Xanthophylum	11	62	5.64
16.	Onion	208	2176	10.46
17.	Naga Cucumber	42	332	7.90
18.	Mushroom	533	3213	6.03

19.	Pumpkin	14	118	8.43
20.	Leafy vegetable	416	3328	8.00
21.	Water Melon	17	175	10.29
22.	Carrot	54	618	11.44
23.	Coriander	12	20	1.67
24.	Potato	680	6830	10.04
25.	Others	105	725	6.90

Table: Major plantation crops during 2013-14

Sl. No.	Crops	Area (Ha)	Production (MT)	Productivity (t/ha)
1.	Cashew nut	486	395	0.81
2.	Areca nut	144	789	5.48
3.	Coconut	675	5450	8.07

Table: Major spices during 2013-14

Sl. No.	Crops	Area (Ha)	Production (MT)	Productivity (t/ha)
1	Black pepper	40	5	0.13
2	Turmeric	217	2865	13.20
3	Naga Chilly	132	686	5.19
4	Betel vine	34	60	1.76
5	Aromatic & Medicinal	16	94	5.87

i. Horticulture Potential:

The state of Nagaland in general and Dimapur in particular has been gifted with a unique topography and varied agro – climatic and soil conditions, which offers opportunities to cultivate a variety of horticultural crops like vegetables and fruits. Among vegetables spring summer (cucurbits, bhindi beans), summer (cucurbits, bhindi, beans) as well as winter vegetables (cabbage, cauliflowers, carrot, radish, palak, pea, etc.) are being cultivated in the district. Fruits like pineapple, guava,

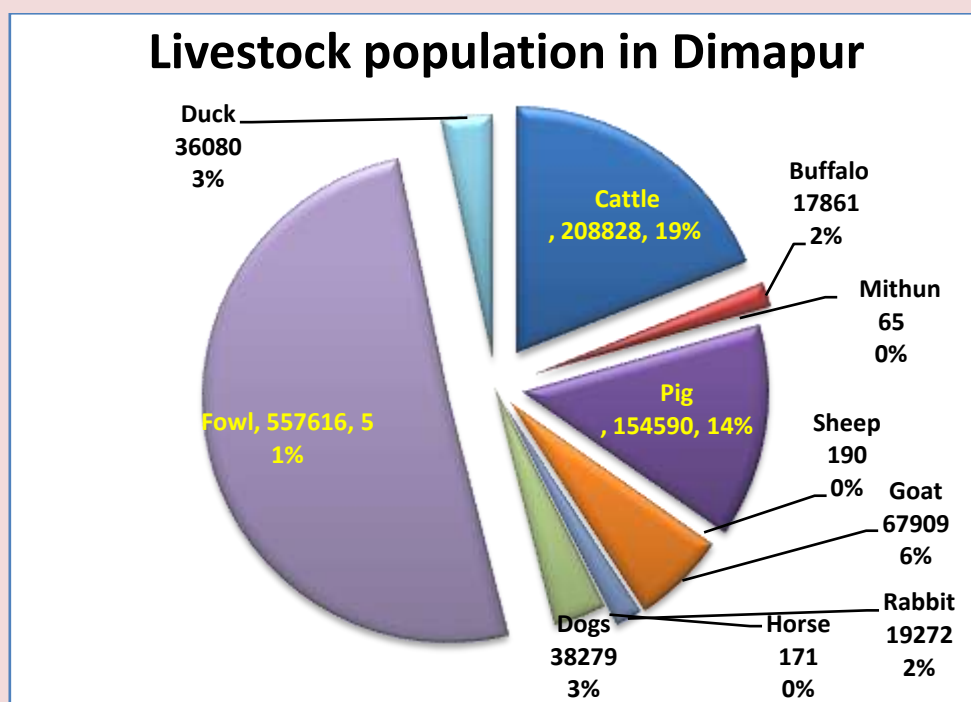
lemon, litchi, and mango are the major ones covering the area in the district. Among floriculture, the commercial crop is Anthurium, which is being exported through Zopar Exports under poly house conditions in Sovima village of the district.

LIVESTOCK

Livestock and Poultry play an important role in the economic life of the major population of the district specially those living in the rural areas. Nagaland being high meat consuming state the rural masses are actively engaged in livestock rearing for their daily needs and also for generating additional household income. Diary, Piggery and poultry are the main livestock of the district. The role of livestock and poultry farming in livelihood earning of farmers is enormous. Dairy farming is being practiced by a good number of farmers in the district. In rural areas each and every household has 1-2 pigs and 5-6 nos. of poultry birds in the backyard of their houses. Apart from Diary, Piggery Poultry, Duckery is also being practised however; goat and rabbit are limited to small number only.

Table: Status of livestock, poultry distribution in Dimapur District (2007 Census)

Name of Block/ circle	Cross Bred cattle	Indig. cattle	Buffalo	Mithun	Cross Bred sheep	Indig. Sheep	Goat
Dimapur Sadar	50251	56822	493	Nil	8	4	23815
Chumukdima	31396	40263	2062	Nil	8	15	14142
Kuhoboto	5843	15153	1779	8	Nil	Nil	4422
Nihokhu	5020	11933	2357	8	Nil	Nil	2823
Dhansiripar	5179	10793	1785	Nil	41	36	2927
Medziphema	18694	23424	2479	498	Nil	Nil	3810
Niuland	14688	32382	5864	6	27	29	14353
Total	131071	190770	16819	520	84	84	67292



Livestock population in Dimapur District

Table: Total production of Milk, meat and eggs in Dimapur district during the year 2015

Produce	Total requirement	Dimapur production MT	Short fall	Remarks (Per day/person)
Meat (MT)	13826.6015	11500.00	-2326.6015	100 g
Milk (MT)	20739.90	34716.00	+13976.10	150 ml
Egg (Nos. in lakhs)	138.266015	269.02	+130.753985	1 egg

Source: Department of Veterinary and Animal Husbandry, Kohima

Table : Milk yield

Type of animal	Milk yield (litres/day)
Cross bred cattle	3.78-5.40
Indigenous cattle	0.950-1.556
Buffalo	0.925-1.515
Goat	0.140-0.426

Source: Department of Veterinary and Animal Husbandry, Kohima

i. Cattle Production System:

In the district most of the farmers leave their cattle for free grazing except during the season of paddy cultivation. However some farmers' follow stall fed system.

ii. Mithun Production System:

The Mithuns are not reared in the district. But in Medziphema block, National Research Centre on Mithun was established in 1988. There are 76 Mithuns of Nagaland, Manipur, Mizoram and Arunachal Strains which are being maintained by NRC-M for experimental purposes.

iii. Goat production system:

For goat rearing free grazing system is followed in the low lying and foothills of the district.

iv. Pig production system

In pig production both loose and stall fed system is practiced. In piggery, most of the farmers follow stall fed system with kitchen waste and locally available feeds like Colocacia leaves, stem, tapioca, amaranthus leaves, sweet potato, and, rice polish, wheat bran etc. The Veterinary department is trying to provide the health services by organizing the veterinary camps and trainings. The animals are being examined, vaccinated and medicines are provided as per need. (Photo-pig rearing)



Pig rearing system in farmer's field

v. Poultry production System

Most of the farmers follow backyard system of poultry rearing, however, some farmers with higher number of poultry birds follows deep litter system. In case of backyard poultry system, the birds are fed with broken rice / maize seeds in morning and evening. The birds are more prone to diseases due to unhygienic conditions.



Poultry production system in Dimapur district

FISHERIES

Dimapur district has got good potential for fishery development in dams, rivers, ponds and small lakes, which are under progress in some areas like in Zuheshe Village under Niuland Sub Division, and a big fishery development project is also under progress near Seithekima- A village. The district has a lot of marshy land which can be developed into ponds and fish farming will raise economic status of the rural poor. Fishery department is assisting the rural poor by providing fingerlings under renovation scheme. Paddy cum fish culture is being practiced in the valley or low lying areas of the district. The department of fisheries has constructed the dams in Chathe River to improve the condition of fish farming in the district.

i. Infrastructure and Support mechanism

The Department of Fisheries, govt. of Nagaland organise training programmes every year on Fish farming. The department has Training cum Awareness Centre, Hatchery Unit, Fish Reservoir Tank etc. The trainees are taught on Fish farming,

Ornamental fishes, Detection of different diseases, Soil and water analysis etc. The fishery department has Hatchery unit and Fish reservoir Tank, well developed laboratory at Half Nagarjan. The department has another hatchery unit at Jorupokhri and Govt. Fish farm at Puranabazar, Dimapur to produce more number of Fingerlings.

ii. Current area under Fisheries production and productivity

Though the district has the potential for development of fisheries, the total area of the fish farming is only 1436.00 hectares. Under Renovation scheme Fingerlings were distributed by the department of fisheries, Govt. of Nagaland, during 2013 -14 for Dimapur district are given below.

Table : Achievement of Fisheries Department, Govt. of Nagaland

SI no.	Particulars	Unit	Dimapur district
1	New fishery ponds developed	area in ha	70.00
2	No. of beneficiaries (new pond)	No.	127.00
3	Fish seed supplied	Lakhs	21.82.00
4	No. of beneficiaries (Fish seeds)	Nos	697.00
5	Production of fish (Culture & capture)	M.T.	4055.00
6	Total water area (ponds & tanks) in cumulative	ha	1436.00
7	Total no of ponds and tanks in cumulative.	No.	6483.00

Source: Statistical Hand Book of Nagaland 2014

ii. Scenario of Irrigation in the District:

The Total geographical area of Dimapur district is 927000 ha. The Total Irrigation potential of the District is around 67000.00 ha. The Department of Irrigation & Flood Control, Government of Nagaland, Dimapur has so far had created an irrigation potential of about 12947.50 ha (under AIBP Scheme implemented by the Department).

Table: Irrigation scenario in the District

Sl. No	Districts	Gross cultivated area	Net cultivated area	Gross irrigated area	Net irrigated area	Net irrigated %	Rainfed	
							Area	% of net cultivated area
1.	Dimapur	20704.00	18470.00	15400.00	14635.23	95.03	32380.0	57.04
2	Nagaland	179236.62	176948.62	74880.00	61152.39	81.67	378821.31	

(Source: Nagaland Basic Facts-2008, Directorate of Agriculture Department, Nagaland & NASTEC)

Sericulture

The entire district of Dimapur is unique in large Bio- Diversity of Sericigenous Flora and Fauna, Climatic and Soil conditions prevailing in the Entire District of Dimapur is also suitable for Commercial Exploitation of all four varieties of Silkworms Viz. Mulberry, Eri, Muga and Tsar. Among these four varieties of Silk activities, Eri culture and Muga culture have gained popularity in the District.

In Dimapur, two farm units i.e. Mulberry Silk Extension Center in Samaguri and Eri Seed Grainage in Dhansiripar, are functioning and the main office which is the District Sericulture Office at Signal Angami Village that includes a reeling and weaving unit and a cocoon bank. The present scenario is quite encouraging as we see more and more people taking up or showing interest in sericulture. We recently concluded a three day beneficiary empowerment programme where 75 farmers were trained on mulberry sericulture techniques. More private farms and plantations are coming up in and around Dimapur

CHAPTER-III. CONSTRAINTS IN AGRICULTURAL PRODUCTION

CROPS

The share cropping is the major problem of the district. The agricultural operations are being done by the cultivators, who are the migrants from neighbouring states and countries. The land owner visits their fields occasionally at the time of sowing and harvesting. Rice is staple food for the people of Nagaland. The rice being the mono and major crop of district covers the maximum area under cultivation. The high yielding but long duration varieties are being cultivated by the farmers which doesn't give much scope for cultivation of second crop after the harvest of paddy. Stray cattle's during Rabi season also creates a menace for cultivation of winter vegetables, oilseeds and other crops as farmers after harvest of paddy leave their cattle till May/June.

In general farmers cultivate local or low yielding varieties with negligible use of fertilizers and manures. Farming is done either manually or by bullocks without the use of tractors or power tillers as majority of the farmers are marginal or small. Non availability of good quality seeds and planting materials is major constraints in agriculture production system in the district.

Table: Constraints in agronomical crops in the district.

Sl no.	Crop	Constraints
1	Paddy	Use of local and low yielding varieties, long duration varieties, Improper use of fertilizers, high infestations of Pest (stem borer, leaf folder and Gundhi bug)Post and harvest losses,
2	Maize	Use of local, low yielding varieties, high infestations of Pest (stem borer). Lack of irrigation in winter maize
3	Pulses	Low yielding varieties, high infestations of Pest and disease (Aphid, pod borers, rust, powdery mildew & YMV etc.)
4	Oilseeds	Use of low quality and inferior local variety and lack of processing units along with moisture stress conditions during growth & maturity stages

5	Potato	Lack of disease resistant varieties, Red ant and termite infestation lowering market the price, Lack of irrigation & cold storage facilities
6	Sugarcane	Lack of suitable high yielding varieties for the area, lack of processing units and market

1. Horticultural crops:

As fruits and vegetables are perishable in nature, the harvesting stage and transportation period matters a lot. The refrigerated vans should be used to send such produce to distant market or should be consumed in the state itself. A better road facility for transportation is also required. The Government intervention for minimum support price, improvement of proper marketing network will help farmers to get a minimum returns. The quality seeds and planting material is the major constraints for horticulture industry in the district.

The district is blessed with suitable agro climatic conditions and natural resources; the horticulture industry is lagging behind due to following constraints

- i. Lack of quality seeds and planting materials
- ii. Lack of marketing infrastructures
- iii. Lack of processing units
- iv. Lack of transport facilities as the produce is perishable in nature
- v. Cattle trespass

Table: Constraints in Horticultural crops in the district.

SI no.	Crop	Constraints
1.	Banana	Wilt, Pseudo stem borer ,rhizome weevil & fruit scarring beetle
2.	Pineapple	Rodent and Larger spacing and planted along the slope
3.	Cashew nut	Closer spacing and lack of processing unit
4.	Guava	Wilting
5.	Citrus	Negligence, orchard is not managed properly, attacked by diseases
6.	Ginger	Soft rot and Bacterial wilt

7.	Turmeric	Low production due to local cultivars
8.	Tomato	Lack of quality seed, irrigation, lack of nutrient management, fruit borer, leaf minor, blight (early & late), bacterial wilt
9.	Long bean	Pod borer and aphids
10.	Chilli	Lack of quality seed, irrigation, lack of nutrient management, wilting, leaf curl, anthracnose
11.	Brinjal	Lack of quality seed, irrigation, lack of nutrient management, wilting, fruit and shoot borer,
12.	Cucurbits	Lack of quality seed, irrigation, lack of nutrient management, epilechna beetle, red pumpkin beetle, fruit fly, Downey and powdery mildew,
13.	Cabbage	Cabbage butterfly, hairy caterpillar, lack of HYV's and improper use of fertilizers
14.	Cauliflower	Lack of HYV's, caterpillar, Boron, molybdenum & calcium deficiency

2. Animal Husbandry

Farmers generally rear indigenous breeds of livestock and poultry, which are low productive but adoptive to the local conditions. The availability of improved breed of livestock and poultry are one of the important problems in state. ICAR Research complex for NEH Region, Jharnapani, Nagaland, is providing the improved breeds of pig, poultry and Rabbit to the farmers but these are not sufficient for the district and state. Non availability of proper animal health care in the remote villages due to bad road condition. Inadequate availability of breeding facilities, Inadequate availability of quality feeds at affordable cost, Lack of hygienic slaughtering and marketing of meat, lack of knowledge about improved managemental practices.

Table: Constraints under Animal Husbandry

Sl no.	Animal	Constraints
1	Cattle	Haemorrhagic Septicaemia, Foot and Mouth disease, Contagious Bovine Pleuro-pneumonia(CBPP) , Brucellosis
2	Buffalo	Haemorrhagic Septicaemia, Foot and Mouth disease, Contagious Bovine Pleuro-pneumonia(CBPP), Brucellosis
3	Mithun	Foot and Mouth disease, Brucellosis, Tuberculosis, Black Quarter, Anthrax, Infectious Bronchitis Rhinotracheitis (IBR) etc.
4	Sheep & goat	Contagious Caprine Pleuro-pneumonia(CCPP) , Haemorrhagic Septicaemia, Foot and Mouth disease
5	Pig	Swine fever, FMD, Japanese Encephalitis, Influenza, Brucellosis, Colibacillosis, Salmonellosis, Anthrax
6	dog	Rabies, Canine distemper, parvovirus, infectious Canine hepatitis, Mange,
7	Rabbit	Ear Canker, Hock sore, Mange, Coccidiosis
8	Poultry	Fowl Pox, Infectious Coryza, Chronic Respiratory disease, Ranikhet Disease, Fowl Typhoid, Infectious Bursal Disease, Coccidiosis
9	Duck	Duck plague, Duck cholera, Botulism, Aflatoxicosis

FISHERIES

Dimapur district has got good potential for fishery development in dams, rivers, ponds in harvested rain water (June to February). The Soils are acidic in Nature which affects the water pH resulting to low production due to water acidity. The average pH of pond water has been reported to be moderately acidic i.e. 5.5 to 6.5. The lack of availability of quality fish fingerlings are one of the major problem in the district.

Table: Constraints under Fishery

Sl no.	Fresh water aquaculture	Constraints
1.	Fisheries	Low production due to Improper management of ponds (manuring, stocking density, feeding schedule and disease management) Oxygen depletion in the pond water, Lack of availability of quality fish fingerlings in the district, Acidity of water hampers the fish breeding

1. Irrigation and Flood control:

The Department use to create the infrastructure to facilitate irrigation but over time due to non maintenance of the conveyance systems as well as the head works the beneficiaries are not able to fully utilise the benefits of the projects. Due to non availability of repair and maintenance fund, the department cannot execute the said works once the project is executed and handed over to the beneficiary.

2. Sericulture

In Dimapur Districts only three types of silkworm rearing namely Mulberry, Eri and Muga are practiced by the Farmers, of which, Eri and Muga silkworm rearing are most popular. However, it is found that lot of constraints are being faced by the Farmers in the field which is found to be un-organized.

Table: Constraints under Sericulture

Sl no.	Sericulture	Constraints
1.	Mulberry silkworm, Eri Silk worm, Muga Silk worm	Lack of knowledge on improved method of rearing silkworms and plantation of silkworm food plants, lack of quality silkworm seeds for Mulberry, Eri and Muga, Lack of infrastructure for silkworm seed production, Lack of space for scientific silkworm rearing at Farm level in the department, Lack of sufficient rearing appliances such as rearing trays, rearing stands, leave chamber, Lack of organized marketing system

3. Medicinal and Aromatic plants

Lack of awareness on indigenous medicinal plants is one of the important issues. The climate and soil conditions are very much suitable for cultivation of Lemon grass. During 2001-02 many farmers have started cultivation of Lemon grass but stopped after 2 -3 years due to lack of processing units. Patchouli and Vanilla are being promoted by Department of Land Resources, Govt. of Nagaland, Dimapur for cultivation in the district but due to lack of marketing and processing units the farmers are being discouraged so development of market infrastructure and marketing channels and processing unit for extraction of Oil and Oleoresins need to be taken care of.

CHAPTER-IV. INSTITUTIONAL SUPPORT FOR AGRICULTURE DEVELOPMENT

CROPS

1. Department of Agriculture – State Agriculture Department, Government of Nagaland has a net work of establishments in the District to cater the need of farming communities.

i. Joint Director Office- This office is headed by the Joint Director Agriculture, this office is specifically dealing with sugar cane development in the district. They are testing the newly released varieties of Sugarcane, multiplying through tissue culture, etc. The Joint Director is supported by Agriculture officers and other supporting staff.

Address for communication

Joint Director Agriculture (Sugarcane) ,
4th Mile Dimapur, Near Agri Expo Site
Nagaland

ii. District Agricultural Office- District Agricultural Officer is the head in the district agricultural setup. Under him 2 SDAO's and other 2 class I and 6 class II official along with 33 field functionaries work-in the establishment. The other mentioned officer are manned by class I junior officers along with subordinates.

Address for communication

District Agricultural Office,
Lake View Colony, Near Naga symmetry
Dimapur, Nagaland.

2. Integrated Extension Training Centre (IETC) & Sameti, Medziphema

The institute facilitates and conducts various short trainings, refresher courses, workshops, skill up gradation courses for officers, field workers in collaboration with line departments and central institutes like SASRD, ICAR, AAU Jorhat and TRAI under Ministry of Agriculture. IETC is offering a two year diploma agricultural extension training course for catering to the needs of the unemployed youth who will be self- employed or work as entrepreneurs in various agriculture and allied sector on completion of their courses and also observe in the Agriculture department, Horticulture & rural Development.

1. There is also an institute called SAMETI (State Agricultural Management and Extension Training Institute) under the Ministry of Agriculture, Government of India, new extension Reforms programme. The object of SAMETI is to provide certificate course to ATMA functionaries, Agriculture and allied department Officers. They have the facility training 52 to 60 persons at time having Farmers' Hostel with capacity of accommodating 36 farmers and SAMETI guest house with accommodation for 16 persons.
2. PG Diploma in Agriculture Extension Management was also started in since 2010 and 68 officers have passed out. The PGDAEM certificate holders can avail financial assistance for setting up of Agri Clinic and Agri Business. A total of 68 Agriculture officers and Agri. Allied Department officers were trained for strengthening of skills and knowledge. Off and On campus trainings in collaboration with AAU and MANAGE, Hyderabad was conducted for 450 ATMA functionaries.

Address for communication

Principal, IETC & SAMETI,
Medziphema, Nagaland -797106

3. Bio Control Laboratory

The State Bio-Control Laboratory, Medziphema, under the Department of Agriculture, Government of Nagaland, was inaugurated in the year 2000. Mass production of bio agents namely, *Trichogramma* and *Chrysoperla* started during the

year 2001. After some initial study and trials the production of *Trichoderma* was added in the year 2004.

The State Bio-Control Laboratory, Medziphema, is the only laboratory in the state and few among the country venturing into mass multiplication of bio agents. The laboratory has been at the fore front in the promotion of Integrated Pest Management and biological control of pest and diseases. It has been providing bio-agents, quality cultures, working knowledge and experiences in biological control.

i. The aims and objectives

1. Multiplication of bio-agents in the laboratory and subsequent release in the farmer's fields against their target pests.
2. Conservation and augmentation of natural enemies already present in the farmer's fields
3. Monitoring and surveillance of insect-pest, disease, weeds and bio-agents situation on major crops
4. Training to the trainers & farmers in identification, production, utilization and evaluation of bio-control agents
5. Standardization of methods of mass production of predators, parasitoids & pathogens.
6. Standardization of technology for protection of different crops against pests and diseases.

List of Bio-agents produced

- + *Trichogramma japonicum*
- + *Trichogramma chilonis*
- + *Trichogramma brassicae*
- + *Trichoderma viride*
- + *Trichoderma harzianum*
- + *Trichoderma konigii*
- + *Pseudomonas flourescens*

ii. Production Status:

The State Bio-Control Laboratory, Medziphema has been producing on an average 15000 Trico cards/annum (nearly 277 million egg parasitoid of *Trichogramma spp*) . It has also produced about 5000 kg of talc based formulation of bio-pesticides and

about 300 litres of liquid formulation of the same. *Pseudomonas fluorescens* was produced nearly 200 kg/annum.

iii. Mode of Distribution:

1. The bio agents produced at the laboratory are distributed free of cost to the farmers through the direction of the Director of Agriculture, through the various District Agricultural Offices, Sub Divisional Agriculture Offices, Research Stations and offices located throughout the state. Positive feedbacks and responses have been received from the farmers across the state.
2. The bio-agents are mainly distributed during two important seasons: Kharif and Rabi season. In addition to this, the bio agents are produced and made available to the farmers throughout the year.

Address for communication

Lab. Incharge, Bio-control Lab,
Medziphema, Nagaland -797106

4. Bio-Fertilizer Laboratory

Bio-fertilizer Laboratory at Medziphema was initiated during the year 1999-2000. Construction of the Lab building was completed in December 2001. Biofertilizer Laboratory was commissioned on the month of January 2002. Nagaland was brought under Biofertilizer Production Map in India in 2002. It has the capacity to produce 20 – 25 MT in a year.

i. Aims and Objective

1. To promote Integrated Plant Nutrient System (IPNS) for sustainable agriculture.
2. To minimize the use of chemical fertilizers by 25%.
3. To increase crop production level by 25-30%.
4. To maintain soil fertility system.
5. To protect destruction of natural eco-system in eco-friendly manner.
6. To promote and substantiate organic farming/organic agriculture.
7. To produce healthy crops and healthy food.

ii. List of Bio-fertilizers:

1. The term “Biofertilizer” is made up of two words; ‘Bio’ means living ‘fertilizer’ means a product which provides nutrients in useable form.
2. Bio fertilizers are carrier based preparations containing live or latent cells of effective strains of bacteria or fungi or algae.
3. When it is applied to seeds, seedlings and in soils, they helps in fixing nitrogen, solubilising, Phosphorus and Potash through their microbial activity and nutrients are made available to the plants.

iii. Production Status

1. Production of Bio-fertilizer is a continuous process in the laboratory for meeting departmental requirement research & demonstrations.
2. Since its inception in January 2002, 157-6 metric tons of different types of bio fertilizers have been producing till 2014 February.
3. The Laboratory is producing 13(thirteen) MT every year on an average.
4. During 2000 to 2014 laboratory has produced 157.6202 Metric tonnes of bio fertilizers.

iv. Types of Bio-fertilizer produced in the Laboratory

1. **RHIZOBIUM:** It is nitrogen fixer. It is use for legume crops like pulses, oilseeds crops like soyabean and groundnut. Rhizobium is crop specific. The production of Rhizobium is approx. 2.5 metric tonnes/ year.
2. **AZOTOBACTER:** It is use for cereal crops, vegetable crops, fruit crops, plantation crops and flowers. The production of Azotobacter is approx. 2.0 metric tonnes/year.
3. **AZOSPIRILLUM:** It is use for cereal crops, vegetable crops, fruit crops, plantation crops and flowers. The production of Azospirillum is approx. 2.0 metric tonnes/ year.
4. **PHOSPHOTIKA:** It is Phosphate solubilising micro-organisms, use in all the crops with Rhizobium, Azotobacter, Azospirillum, in the same ratio. The production of Phosphotika is approx. 6.5 metric tonnes/year.

v. Distribution System of Bio-fertilizer:

1. Bio fertilizers were distributed to different districts and Sub-divisions along with seeds during Kharif season and Rabi season respectively through SDO and DAO Dimapur
2. Bio-fertilizers are distributed to the farmers at free of cost for proper implementation of departmental schemes, for demonstrations, Researches and training Programmes in different districts and sub-divisions in the state.

Address for communication

Lab. Incharge, Bio-fertilizer Lab,
Medziphema, Nagaland -797106

5. Department of Horticulture:

The Department of Horticulture was bifurcated from the Department of Agriculture in 1992. It is headed by a Director assisted by two Joint Directors and one Sr. Fruit Technological Officer in the rank of Joint Director, Four Deputy Directors, four Junior Officers including one Junior Accounts Officer and a host of Ministerial staff headed by a Registrar.

The Department has established District Head Quarters Office in all the 8 (eight) District headed by District Horticulture Officer. They are assisted by one Horticulture Officer, Asst. Horticulture Officer, four to five Horticulture Extension Asst. And few Ministerial Staff in each District. Recently, the department has set up one Sub-Divisional Office at Shamatore under Tuensang District.

In Dimapur District the department has one state subsidiary establishment ;

1. State Horticulture Nursery-cum-mushroom development Centre, 4th Mile Dimapur headed by a Research Officer.

i. The policy of the department

1. A project should be not less than 10.00 Ha. On compact area basis subject to verification by respective District Horticulture Officer about its feasibility.
2. After the approval for opening of a Project, the department used to provide fruit seedlings depending on the climatic condition at free of cost. In the second year, a subsidy is granted which is based on actual plantation area. The grant of subsidy will continue till the crop attains to its gestation period depending on crops.
3. Other inputs such as fencing materials, fertilizers, plant protection chemicals, etc. are provided to the project from time to time depending on fund availability.
4. The department encourages to take up new plantation of orchards under this scheme with the crops such as Mandarin, Plum, Sweet Orange, Pear, Pineapple, Peach, Banana, Pomegranate, Passion fruit, Litchi, Coconut plantation and other nut fruits.

Address for communication

District Horticulture officer,
Department of Horticulture (DOH),
Medziphema, Nagaland-797 112

6. Central Institute of Horticulture

Central Institute of horticulture was established in the year 2006 for the holistic development of horticulture sector in the North East Region. Located at Medziphema, Nagaland about 30 km from Dimapur city and 44 km from the capital city Kohima the Institute spreads over an area of 43.50 hectare. The main thrust areas of the Institute are refinement and demonstration of identified technologies pertaining to the region; production and supply of quality seed and planting material; training and capacity building of state government officials, field functionaries and farmers on different aspects of horticulture development including organic farming, monitoring of centrally sponsored programmes in the area of horticulture, post harvest management, processing, value addition, marketing and agribusiness promotion.

i. Vision

To emerge as the pioneering, innovative, farmer focused and self-supporting institute in the country

ii. Mission

To provide excellent, innovative and relevant training to all the stakeholders so as to empower individuals and enable horticulture industry to bring about socio-economic development and sustainability in North East Region.

iii. Objectives

1. Capacity building by training of trainers and farmers/beneficiaries.
2. Demonstration of improved production technologies.
3. Accreditation and certification of nurseries in NER
4. Follow-on extension support in the field of horticulture.
5. Promotion of organic cultivation of horticulture crops.
6. Establishing convergence and synergy among programmes in the field of horticulture.
7. Monitoring of centrally sponsored programmes in the area of horticulture.

iv. Focus Areas

1. Training of State Govt. officials and farmers/beneficiaries of North Eastern Region.
2. Production and supply of quality planting material.
3. Accreditation and certification of nurseries in NER.
4. Transfer of technology through method and result demonstration and publication of folders, manuals, leaflets etc.
5. Promotion of organic farming
6. Post harvest, marketing and agri-business promotion through exhibition, seminars, workshop, exposure trip, and buyers' seller meet.
7. Coordination with state horticulture departments of NER and other National organizations.
8. Monitoring of centrally sponsored programmes in the area of horticulture

Address for communication

The Director, Central Institute of Horticulture (CIH),
Medziphema, Nagaland-797106

7. Department of Soil and water conservation

The department of soil and water conservation helps the farmers of district by providing the training on soil improvement and conservation of water through different projects implementation

1. Integrated Land Development (ILD), this project is located at Seithekiema C & A and is supported by NABARD.
2. Plantation of lime for sustainable agricultural production, this project is located at New Chumukedima, Pimla, Shoxuvi, Toluvi, Hovishe and Lotovi. The project is funded by NEC.

Address for communication

District Soil and water conservation,
Near ADC Court, Dimapur

8. Department of Irrigation & Flood Control

The department implements a Centrally Sponsored Scheme called Accelerated Irrigation Benefit Programme (AIBP) is the only programme implemented by the department. Some Farmers had formed a Water Users Associations which is registered as a Society under the Department of Home, Govt. of Nagaland. The Department executes the projects in consultation with these Water Users Associations.

With the scarcity of water these days the Micro Irrigation systems if implemented will benefit the farmers in the near future. Further, most of Dimapur District being foot hill areas, there is tremendous scope for lift irrigation through alternative source of power (electricity supply of the state being erratic and the remoteness of the source of water supply) and creation of water bodies for storage of surface water and to supplement ground water recharge. Also, the farmers have to be sensitised on the judicious use of water through capacity buildings.

Address for communication

Chief Engineer, Department of Irrigation and flood control
4th Mile Dimapur, Near Agri Expo Gate, Dimapur, Nagaland

9. Department of Veterinary and Animal Husbandry

Livestock and Poultry farming have been an integral part of the people of Nagaland since time immemorial. The department of Veterinary & A.H. have been playing a pivotal since for rearing of livestock in the district, thereby provide better germplasm improvement of the local animals for better growth, production and reproduction and also to provide improved breeds to farmers to improve the rural economy

At present the department of Veterinary & A.H. have the following farms.

1. **Hatchery Unit Dimapur:** The farm has trained 60nos of interested local farmers during the year 2014-15 and 9000nos of Vaccinated chicks were supplied to the local farmers.
2. **State Chick Rearing Centre, Medziphema:** The farm has a hatching capacity of 10,000nos of eggs in one batch. It also serves as practical teaching to the VFA Trainees. The farm also supplied 26,000 chicks under rural backyard poultry.
3. **State Pig Breeding Centre, Medziphema:** This centre has a capacity of rearing 100 sows & 10 boars. The farms supply about 500nos of piglets to the farmers.
4. **State Cattle Breeding Centre, Medziphema:** The farm has a capacity of 50nos of cows and 10nos of bulls.
5. **Regional Rabbit Breeding Centre, Jharnapani:** The objective of the farm is to supply the Rabbits to the interested farmers & Self Help Groups (SHGs) at nominal price enabling them to rear it for me purpose. The farms has three different breeds, i.e New Zealand White, Grey Giant and Soviet Chinchilla.

Address for communication

Chief Veterinary Officer,
Department of Veterinary and Animal husbandry,
Government of Nagaland, Burma Camp, Dimapur Nagaland

10. NABARD

National Bank for Agriculture and Rural Development (NABARD), Mumbai
NABARD is set up as an apex Development Bank with a mandate for facilitating credit flow for promotion and development of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts. It also has the mandate to support all other allied economic activities in rural areas, promote integrated and sustainable rural development and secure prosperity of rural areas. The bank also promotes and finances Vikas Vahini Volunteer (VVV) or Farmers clubs by organizing the farmers.

i. Thrust areas for development

On the basis of the assessments made under the farm sector and non farm sector, the thrust areas that have been identified for development is highlighted below:

ii. Farm Sector

1. MI schemes are to be encouraged to exploit surface water potential for increasing production and productivity.
2. Land development activities are to be given due importance. Institutional support may be extended to this sector.
3. Plantation and horticulture is to be given a thrust for development with emphasis on development of fruit crops. Cluster approach would be best suited for the development of this sector
4. Rearing of cross-bred cows to be intensified as availability of green fodder offers scope for development.
5. For the purpose of piggery development, emphasis should be to concentrate on establishing units to augment breeding stock at a pace faster than the present and up-gradation of existing stock through cross breeding programmes.

6. Agro-processing activities are to be encouraged.
7. Initiative taken by the bankers in the issue of Rupay Kisan Credit Card (KCC) has to be further accelerated.

iii. Non-Farm Sector

1. Increased institutional credit is a must for rural development and employment generation.
2. The strategy of Self-help Groups (SHGs) and Joint Liability Groups (JLGs) is to be adopted for empowering rural poor. Banks may adopt it as a strategy to reach the un-reached.
3. Borrowers' education, entrepreneurship development, vocational trainings and skill improvement is to be given more importance.
4. Credit flow to handloom sector may be increased.
5. Banks should popularize credit facilities available under Swarojgar Credit Card (SCC) Scheme.

iv. In discharging its role as a facilitator for rural prosperity NABARD is entrusted with:

1. Providing refinance to lending institutions in rural areas
2. Bringing about or promoting institutional development.
3. Evaluating, monitoring and inspecting the client banks.

v. Besides this pivotal role, NABARD also:

1. Acts as a coordinator in the operations of rural credit institutions.
2. Extends assistance to the government, the Reserve Bank of India and other organizations in matters relating to rural development.
3. Offers training and research facilities for banks, cooperatives and organizations working in the field of rural development.
4. Helps the state governments in reaching their targets of providing assistance to eligible institutions in agriculture and rural development
5. Acts as regulator for cooperative banks and RRBs.

vi. Agricultural technologies supported by NABARD

1. Cultivation of horticultural crops under controlled conditions (poly house).
2. Micro irrigation system/ plasticulture in irrigation.
3. Vermicompost technology.
4. Bio pesticides and bio fertilizer.
5. Tissue culture for special crops.
6. Mushroom production under controlled condition.
7. Introduction of new medicinal and herbal crops

11. Nagaland Bamboo Development Agency (NBDA)

Nagaland, since the notification of the State Bamboo Policy and the establishment of the Nagaland Bamboo Development Agency has been working for bamboo economic development in the State. The initiatives and development activities being supported by the State Government under the State Plan and the assistance of the central Government through the National Bamboo Mission and the National Mission on Bamboo Applications.

The State announced its bamboo policy on 15th March 2004 and with it the Nagaland Bamboo Development Agency (NBDA) was established during 2004-05 with the motive to undertake and oversee the development of bamboo in the State both as a resource and as an enterprise. The agency is implementing bamboo development programmes and projects with the assistance from the central Government of India through the National Bamboo Mission and the National Mission on Bamboo Applications, the State Government and also institutions both from within the country and abroad. The implementation of the programmes and projects are being taken up in a mission mode with the objective to foster in ecological security and economic growth through development and utilization of the bamboo resources.

The development of bamboo in Nagaland is envisaged to be taken up from two perspectives, **Resource development and Enterprise development**. Increasing the existing resources through scientifically managed plantations and regeneration are areas where the agency is focusing on to develop bamboo resources.

Technology sourcing and dissemination, capacity building and skill up gradation, infrastructural developments and marketing initiatives are the some areas of focus for enterprise development.

i. Scenario of Bamboo Development:

The Nagaland Bamboo Development Agency has undertaken bamboo plantation covering around 3800 hectares in Dimapur district under its resource development initiatives. The bamboo species under plantation includes Bambusa tulda, Bambusa balcoos, and Bambusa pallida.

ii. Nagaland Bamboo Resource Centre:

An important step taken by the State Government, under the aegis of the Nagaland Bamboo Development Agency, towards promoting the development of bamboo enterprise has been the establishment of the Nagaland Bamboo Resource Centre (NBRC) at Dimapur, the commercial hub of Nagaland. The Centre was conceptualize to introduce and disseminate bamboo cultivation and processing technology, develop entrepreneurial skill, undertake research and developmental activities, and facilitates the institutionalization of bamboo development as an industry.

The NBRC was initially envisaged to be a Common Facility Centre but soon it has become a location for introduction of new technologies both for propagation and plantation as also new technologies for value addition and processing of Bamboo based products. The facilities, machinery and production lines that have been installed in the NBRC are being fully utilized and the NBRC is also now functioning as an ‘Incubation’ centre where the entrepreneurs are made to mature in production techniques and marketing their products. The centre also caters to bamboo Research and Development works and undertakes bamboo development training programmes supported with a fully furnished and functional 50 bedded trainees hostel and an educational conference hall. The agency has already conducted a number of training programmes in this centre. **The Centre is located in an area of land measuring 28.54 acres of land.**

Currently the following facilities and technologies are already set up at the NBRC for demonstration, production and extension works.

1. A Vegetative propagation nursery with 8.00 lakhs seedling capacity
2. Demonstrative Bamboo Charcoal production kilns in different technologies.
3. Charcoal briquette unit.
4. Bamboo Treatment Plant (Vacuum Pressure Impregnation Plant).
5. Bamboo Stick and Bamboo Sliver production line.
6. Bamboo product drying unit.
7. 120 Kw Bamboo Gasifier unit.
8. Venetian Blind weaving unit.
9. Bamboo fiber sanitary pads production unit.
10. Bamboo handicraft emporia cum consignment sale depot.
11. Bamboo setum cum park.
12. Mini bamboo estate with 10 (ten) working sheds.
13. Children's park.
14. Green Circle, the Bamboo Amphitheater.
15. Bamboo Exhibition and sales area with 16 inbuilt stalls.
16. A conference hall.
17. A fully furnished 50 bedded trainee's hostel with separate dormitory for ladies

iii. Assistance under NBDA:

iv. Plantation:

Under resource development, The Agency undertakes annual bamboo plantation through the assistance provided by the National Agro-forestry and Bamboo Mission (formerly National Bamboo Mission), Ministry of Agriculture, Horticulture Division, Government of India. Farmers/ beneficiaries with substantial land for carrying out bamboo plantation are chosen and assisted with bamboo saplings/seedlings and other logistics by the Agency. Some selected villages have Village Bamboo Development Committees through which the plantations are being carried out and monitored.

iv. Trainings/Skill Development/Capacity Building:

Trainings are organized on a regular basis by the Agency within the NBRC under well qualified master craftsmen and resource persons from within the State and even outside. Trainings are also conducted in different villages and headquarters around the State on a need-based curriculum. The Agency also sends trainees to other parts of the State including the CBTC, Assam annually. In order to widen the scope for the local entrepreneurs and craftsmen, the Agency also collaborates with other institutes and agencies like National Mission on Bamboo Application (NMBA), UNIDO, National Institute of Design for various skill up-gradation programmes. Along with these, the Agency also organizes skill exchange programmes in the NBRC from time to time by roping artisans/ craftsmen from different districts and allowing them to have an interface under one platform. Some of these trainings are sponsored by the National Bamboo Mission, Government of India and some by the State Government or other Agencies.

v. Area of Training:

The Nagaland Bamboo Development Agency organizes/ undertakes and imparts training to different sections of artisans and craftsmen in the following areas:

1. Bamboo Handicrafts
2. Bamboo Furniture
3. Bamboo Charcoal
4. Bamboo Shoot processing and production
5. Bamboo incense sticks making
6. Bamboo construction
7. Bamboo mat making
8. Bamboo Venetian Blinds and Basket making
9. Bamboo nursery and plantation management

These trainings are held periodically and further information can be obtained from the office of the Nagaland Bamboo Development Agency.

vi. NBDA focuses areas of activities:

1. Awareness generation and community sensitization.
2. Formation of bamboo clusters. 34 (thirty four) bamboo clusters already established covering 280 villages.
3. Skill up-gradation, trainings and capacity building.
4. Technology sourcing and dissemination.
5. Resource mapping and validation exercise.
6. Propagate scientific methods for bamboo resource management and regeneration.
7. Support value added entrepreneurial activity.
8. Market networking and development.
9. Popularize bamboo constructions and applications.
10. Formulate and implement schemes for development of bamboo in the State for resource as well as enterprise.

vii. Implementation approach:

1. Selected and commercially viable bamboo species with appropriate species-site matching as suitable to the agro climatic conditions prevalent in the State shall be propagated.
2. The agency shall also facilitate availability of the quality saplings required for the propagation through establishment of a tissue culture lab, series of hardening unit and also set up bamboo nurseries as required.
3. Scientific management of plantations and regeneration shall be encouraged through appropriate training modules conducted for the bamboo farmers.
4. Compact area plantations cluster based as far as applicable shall be encouraged.
5. The plantation shall be implemented through the active involvement of the communities, in particular the Village Bamboo Development Committees (VBDC) through which the plantation assistance shall be provided.
6. Link roads as required shall be constructed to facilitate the extraction of existing resources in the forest as well as in the plantation areas.

7. Steps shall also be taken to upgrade the quality of the existing forest bamboo resources through infusion of appropriate management practice.
8. Integrated cluster development approach shall be adopted wherein a series of bamboo primary processing units shall be set up in the cluster areas in close proximity to the source of the raw material.
9. The agency shall facilitate man power development through trainings/capacity building and exposure exercises conducted at appropriate levels as required.
10. Appropriate and modern technologies available for production of value added, marketable bamboo products shall be sourced and provided to facilitate the establishment of such enterprise in the State.
11. Provisions shall be made to facilitate availability of finance through soft loan schemes.
12. Necessary industrial infrastructure in the form of Bamboo Mini Estates and Common Facility Centers shall be build up to the best extend possible.
13. Steps shall be taken to vitalize the handicraft sector through infusion of technology, machines, tools and design inputs.
14. Shall facilitate the participation of bamboo units in trade fairs/melas/festivals both at the national and international levels.
15. Necessary market linkages and networks shall be developed to assist the development of bamboo as a commercial commodity.
16. Undertake research and development activity to further develop and promote bamboo.

vii. Bamboo Development Vision 2025 approach:

The focus areas of bamboo development in the State are envisaged to be taken up in three phases. In the 1st phase or inception phase i.e. from 2007 to 2012, the focus shall be on augmenting existing resources, commoditization of bamboo with trust to existing industries and other immediately viable industries based on the available bamboo raw materials, building up infrastructures and institutional frame works. The 2nd phase or growth phase i.e. 2013 to 2017 would encompass trust to newer applications and augmenting the developments of the 1st phase. The 3rd phase or consolidating phase i.e. 2018 to 2020. The 4th phase will be for target of maximum

generation of revenue from the resource, both natural and captive. During this phase with the considerable increase in demand for raw bamboo, further new plantations will be carried out anticipating a flourishing bamboo industry i.e. 2020 to 2025.

viii. First Phase 2007-2012:

Augmenting existing resources:

Bamboo is a natural resource that is abundantly available in the state. It is estimated that about 5% of the national bamboo resource is available in the State. Despite of the availability of large resource of bamboo with diverse germplasm, there is likely to be raw material availability constrains due to knowledge gap related to the raw material and accessibility problem. In the intended application specific area, adequate and consistent supply of quality raw material at reasonable cost is required for the development of value added application and enterprise. Augmenting existing resources of commercially viable bamboo species through scientifically managed plantations and regeneration shall therefore be a focus area of activity in the 1st phase.

Commoditization of bamboo:

The uniqueness of the bamboo sector as well as its strength is in the involvement of the community and the utilization of the capabilities of the community towards primary processing of bamboo. Cluster based series of primary processing units with trust to existing industries shall be set up in the rural areas. Bamboo sticks/strips/stabs/slivers, bamboo mats, bamboo charcoal, bamboo shoot etc are some products of primary units. Establishment of other small and micro bamboo enterprise such as Venation blinds, Incense sticks, toothpicks, charcoal briquettes, furniture, bamboo structural applications, conversion of plywood industries to bamboo ply-board industries and industrialization of handicrafts sector shall also be other areas of priority.

Establishment of institutional frame works and infrastructures base:

Institutional frame works both in the government and the private sector needs to be worked and build. The setting up of institutions that would interconnect the various technical, research and financial institutions with endorsement from the existing institutions. Development of institutional capacities, Institutional mechanisms like formalizing the supply chain through contractual systems need to be put in place to enable the development of bamboo sector. Establishment of infrastructures such as roads, CFCs, bamboo resource centers, bamboo mini estates, bamboo mandis etc which are pre requisites to facilitate the growth of the bamboo sector shall be made.

ix. Second Phase 2013-2017:

Thrust to new application of bamboo:

This phase shall emphasis on the higher end new generation bamboo products through the establishment of secondary line of bamboo processing units that shall augment the growth of bamboo enterprise in the State.

Augmenting the developments of the 1st phase:

The growth and development of bamboo has to be sustained and therefore the activities taken up in the 1st phase would require to be augmented as and where required even in the 2nd phase.

x. Third Phase 2018-2020:

Consolidating the developments:

By the end of the 2nd phase it is envisaged that the development and growth of bamboo enterprise in the State is substantially established. The focus therefore would be for product branding, marketing and profitability to consolidate the development.

xii. Fourth Phase 2020-2025:

With substantial wealth in bamboo around the State, the Agency will look at utilizing the vast biomass available through the success of its resource development initiative. The practical methods to tap the huge bamboo resource are to convert bamboo to Ethanol for production of bio-fuel on a major scale, which will require considerable tonnage of bamboo. Secondly, the Agency will promote bamboo tourism through the application of various ways and means, whereby bamboo will be extensively used as a building material, as food, as novelty items and for aesthetics and landscaping.

xiii. Future Scope and Challenges

Integrated Cluster Development Approach to be adopted:

Handicraft & Furniture

1. Product diversification by incorporation of new designs and technology (Focus on Market Oriented Products)
2. Promote use of dye and color in products
3. Develop Mixed medium products
4. Continue to promote technological intervention in Production
5. Identify unique craft/product for promotion
6. Promote one product one village/cluster concept for production
7. Standardize quality packaging
8. Systemize production and marketing chain

Charcoal, Mat, Incense stick:

1. Enhancement of production through appropriate
2. Technological Interventions
3. Cluster enterprise activity

Food

Promote shoot as food through Food festivals, linkage with hotel chains, retail marketing outlet and quality assurance.

Construction

Tie up with architectural and construction firms from outside Nagaland.

Other project

1. Promote establishment of Bamboo lumber, engineered boards, Energy, Activated carbon etc production units - PPP ventures to be encouraged with outside investors.
2. A PPP venture underway with TRUE WAY Pvt. Ltd, of Gujarat for incense stick production (MOU in process).

Cane development

1. To promote captive cane plantation
2. To promote cane and its related products.

Pulp and Paper

1. Create Avenue & channelized supply of bamboos to Tuli Paper mill

Carbon Trading

1. Explore avenue for carbon trading.

R & D:

1. Explore for institutional support for R&D activities.
2. Work in collaboration with research and technical institutions.
3. Need based research and development works for the immediate on the following areas.
4. Moulds, Glue, Clamps and joineries.
5. Mixed medium products.
6. New innovative products and application
7. Improvement of machine tools.

Infrastructure:

Establishment of CFCs/ Mini Resource Centers and Bamboo extraction Road. Mini Resource Centre at Tuli to be taken up on priority.

Energy

Study the feasibility of Promoting small capacity Gasifier units to meet energy requirements, research on production of ethanol from bamboo.

Capacity Building

1. Conduct Entrepreneurship Development Programmes for local entrepreneurs.
2. Conduct orientation programmes for members, Staff and field functionaries.

Workshop and Seminars

Invite bamboo experts and professionals for exchange of knowledge and dissemination.

Bamboo Education

Tie up with educational institutes/universities to include bamboo as subject matter in their curriculum.

Official Contact details:

Nagaland Bamboo Development Agency,
Nagaland Bamboo Resource Centre, 6th Mile, Sovima,
Dimapur - 797 115, Nagaland, India
Phone: 91-3862-241 696/240 217, Fax: 91-3862-241 305
E-mail: nagaland_bda@yahoo.com
Website: www.nagalandbamboo.com

Team Member incharge of Dimapur district: Er. Lipokmeren Ao (Mobile: 9402993576)

CHAPTER-V. RESEARCH AND DEVELOPMENT ORGANIZATIONS RELEVANT TO DISTRICT'S AGRICULTURE

1. Indian Council of Agricultural Research, ICAR Research Complex for NEH Region, Nagaland Centre, Jharnapani, Medziphema

The centre at Jharnapani was established in 1977 with the following objectives.

1. To evolve sustainable integrated farming system for hills to replace Jhum cultivation.
2. Restoration of degrade/ Jhum fallow lands through tree based farming.
3. To increase the overall productivity of different crops through research in cereals, pulses, oilseeds, horticultural, fisheries and other economical crops.
4. Animal health coverage and improvement of livestock production system.
5. To act as repository of agricultural information on net work for state regional international market.

The ICAR complex, Medziphema is headed by Joint Director. The centre has its office building, farm, library and laboratory facilities. The KVK Dimapur, KVK Wokha and KVK Longleng are under the administrative control of Joint Director, Nagaland centre

A lot of research work has been carried out at the centre in the field of agriculture, horticultural, and Animal husbandry also. Salient examples are: Collection and evaluation of banana germplasm have been carried out and Dwarf Cavendish group was found suitable for foothill conditions of Nagaland. The paddy (TRC) varieties Dwarf Masuri, Ranjit, RCM-9, Sahsarang, are performing well in Dimapur district. Among jhum /upland paddy- Teke (local variety), Bhalum-1, Bhalum-2, (released from ICAR Complex, Barapani) is performing better. Turmeric variety – Megha Turmeric (released from ICAR Complex, Barapani) has yield potential of 750 q/ha fresh rhizomes. Among poultry Vanraja and Giriraja are dual purpose birds has been found suitable for rearing in Dimapur district. In piggery Large Black, Hampshire, Burmese Black breeds have been recommended for rearing. Presently the centre is running Mega Pig seed Project and Poultry Seed project, and NAIP at Mon projects. Nearly 35000 to 36000 birds have been distributed at to

farmers/youths under Poultry Seed project similarly 3000 piglets are being distributed to the farmers/entrepreneurs on subsidized rates

Address for communication

The Joint Director,
ICAR Research Complex for NEH Region,
Nagaland Centre, Medziphema- 797106
Nagaland
Contact No. 03862-247250, Fax: 03862-247241

2. ICAR-National Research Centre on Mithun

The campuses of the institute are situated at Medziphema (Dimapur district) and Porba (Phek district) Nagaland. The Jharnapani campus is 25 Km away from the Dimapur railway station and the Porba campus is 150KM away from the Dimapur railway station. The Institute is maintaining two Mithun farms, one at Jharnapani and other at Porba. The Jharnapani farm comprising of 62.5 acre land is located between 25.45° East longitude and 93.53° North latitude, about 300m above the mean sea level. The Porba farm comprising of 230.76 acre land is located between 94.20° East longitude and 24.53° North latitude, about 2133m above the mean sea level.

The mandate of the institute was redefined twice in the year 1997 and 2006. Currently, the National Research Centre on Mithun is functioning for developing the scientific and sustainable mithun rearing system and for catering the needs of mithun farmers with the following mandates.

1. Identification, evaluation and characterization of mithun germplasm available in the country.
2. Conservation and improvement of mithun for meat and milk.
3. To act as a repository of germplasm and information centre on mithun.

Institute is collaborating with various agencies for research and development programme and for disseminating information at local, state and national level. Students from other universities also deputed to conduct research for M.Sc. and Ph.D. dissertation. Currently institute is running collaborative research programme with National Dairy Research Institute, karnal, Indian Veterinary Research institute,

Barielly, Assam Agriculture University, Khanapara and ICAR Research Complex, Barapani.

Address for communication

The Director,
National Research Centre on Mithun,
Jharnapani, Medziphema- 797106
Nagaland

3. SASRD, Medziphema Campus, Nagaland University

The North Eastern Hill University, a Central University, with its Headquarter at Shillong, established the College of Agriculture at Medziphema in Nagaland in accordance with an ACT of PARLIAMENT 1973. It was in the year 1978 that the dream of establishing a College of Agriculture at Medziphema, Nagaland, to cater the need of Hill Agriculture became a reality with the foundation stone laid down by Shri S.S. Barnala, the, then Union Minister for Agriculture, Government of India.

The main objective of the establishment of College of Agriculture was to fulfill the requirements of specialized human resource for all the North Eastern Hill states including the states of Nagaland, Meghalaya, Mizoram, Arunachal Pradesh, Manipur, and Tripura.

In 1985, the College was then upgraded to the School of Agricultural Sciences and Rural Development (SASRD) with the objectives of dissemination of knowledge through Post-graduate teaching, research and extension Programmes in agriculture and allied disciplines with special reference to hill agriculture.

Then, with the establishment of Nagaland University, also a Central University in 1994 in accordance with the ACT of PARLIAMENT 1989, SASRD became an integral part of Nagaland University. SASRD is one of the four Schools under Nagaland University, located at Medziphema in the foot hills of Pauna Range in the Dimapur district of Nagaland. It is a small developing town in between Dimapur and Kohima on National highway 29, about 30 Kms from Dimapur, but well connected with road, rail and air. Medziphema is about 27 kms from Dimapur airport and 30 Km from the rail-station.

The School has now been recognized/ approved by the ICAR at par with other Agricultural Institutions of the country maintained by them. The school has made a significant impact in the field of agriculture of the state and the region with its contributions towards producing human resources for different government departments, Institutions, Centres and various organizations.

i. OBJECTIVES:

1. To disseminate advance knowledge through teaching, research and extension in the field of agriculture and allied disciplines such as Horticulture and forestry, Animal production and Management, Organic Agriculture ,Agricultural engineering, Post-harvest Technology and Biotechnology, Home Science and Agri-business, etc.
2. In addition to higher education, development of skill oriented vocational courses in agricultural and allied disciplines for self-employment and socio economic development of weaker sections of the society and rural mass such as Small farmers, farm labourers, school drop-outs, educated unemployed, low paid employees, rural youth and women.
3. Dissemination of knowledge in agriculture and allied disciplines through distance education with emphasis on practical, visits and field demonstrations for men and women who are unable to afford formal higher education due to finance, time and other constraints.
4. Conservation of soil, water and indigenous natural resources and biodiversity of plants and animals and ethnic culture and traditions and its utilization for sustainable eco-development.
5. To lay emphasis on production of quality food through organic farming and value addition to agricultural and allied commodities for self consumption and market.
6. To develop suitable technologies for hill agriculture that will benefit the farming community of the state and the region.
7. To create ample employment opportunities for the people of the state and the region especially the youth, which will boost the socio –economic condition of its people ,thus creating more peaceful and better society.

ii. Academic program

1. Agricultural Chemistry and Soil Science
2. Agricultural Economics
3. Agricultural Engineering
4. Agricultural Extension
5. Agronomy
6. Livestock Production & Management
7. Entomology
8. Genetics & Plant Breeding
9. Horticulture
10. Plant Pathology
11. Rural Development & Planning
12. Soil and Water Conservation

iii. Teaching:

This institute provides B. Sc. (Ag) Hons: 4 years (8 semesters) course degree programme with total intake of 60 Students along with Rural Agriculture Works Experience (RAWES) is offered in the 7th Semester and Experiential Learning (EL) is offered in 8th Semester.

M. Sc. (Ag) programme in 11 nos. of departments with a duration of 2 years (4 semesters) with intake of 15 seats for Horticulture and 8 each in the rest of the departments.

Ph.D. Degree Programme is as per vacancy and infrastructure in eleven departments with durations of 3 years (6 semesters) with course work system.

All the academic departments have highly qualified teaching faculties with farm and fairly equipped laboratories. Establishment of Centre for Rural Development in the Campus has also been initiated. The object of the centre is to train personnel, and to mobilize the village folk, for the purpose of rural Development and to serve as an operative agency to reach the rural masses.

Table: Technical Human Resource Developments (No. of passed out students till 2015)

Sl. No	Courses	No. of passed out
1	P.U.(Ag)	238
2	B.Sc. (Ag) 5 year programme	172
3	B.Sc. (Ag) 4 year programme	1253
4	M.Sc. (Ag)	423
5	Ph. D	40
6	NET (ICAR) qualified (Till date)	35

iv. Research collaborating organizations:

1. Government of Nagaland
2. ICAR Research Complex for NEH region
3. Central Institute of Horticulture
4. RRL, Jorhat
5. NERIST, Itanagar
6. NBRI, Lucknow
7. State Governments of NEH Region
8. Department of Bio-Technology

v. Research & Externally Funded Projects:

Faculty members are actively engaged in research work through guidance of PhD Scholars as well as handling various externally funded projects in various fields in agriculture. The main funding agencies are ICAR, DST, UGC, NEC, DBT, and Government of Nagaland. Different departments are involved in collaborative research with different national institutes, centres and organizations. The School has externally funded projects amounting to Rs. 7.00 Corers.

vi. Extension:

The School is actively involved in various extension activities such as organizing training programmes regularly for the extension workers and farmers on various aspects of agriculture. Faculty members also participate as resource persons in training programmes organized by the institution like ICAR, CIH, state government, NGOs and other organizations. Besides, various departments are also involved in demonstrations of technologies in farmer's field by collaborating with different organizations. In addition, extension activities are also carried out by the students during RAWE program in the villages and also organize various programs through farmers cell.

vii. Other Activities at SASRD:

1. Special emphasis on Traditional/ Hill & Organic farming systems: Courses are designed in order to let the students understand traditional farming system, the shifting cultivation (jhuming) and with an emphasis to provide the alternative to shifting cultivation which forms spring board to sustainable agriculture. The School lays much emphasis on practical training, field work and research pertaining to Hill & Organic Agriculture as well as Rural Development.
2. Rural Agricultural Work Experience (RAWE) programme: In order to impart most practical approaches to the constraints faced by the farmers, RAWE program has been made a compulsory component of B.Sc.(Ag) Honours degree programme. One complete semester is wholly committed to this program, where the students stay in the village and interact with farmers and get acquainted with rural problems related to agriculture and its solution with modern developed technologies.
3. Experiential Learning (EL) Program : Another semester is devoted to EL program , where students are trained for skill development and Entrepreneurship with an objective “ earn while you learn”.

4. Career Counselling and Placement Cell: A centre for students' career counselling and placement has been established for guidance of students to their future academic career and employment etc, besides equipping them with soft skills.
5. Study Tour: In addition to local and regional field trips for exposure of students to recent developments in agriculture and allied disciplines in the country, study tour has also been made compulsory. This tour offers opportunity to the students to visit Agricultural Institutions in other states of the country and different state government organization to study the latest work done and new technologies developed in the country.
6. National Service Scheme (NSS):
NSS programmes are organized in the School under the coordination of a teacher in which the students are enrolled as volunteers. After successful completion of the programme, students are provided with a certificate.
7. Farmers Cell:
The School has established a Farmers Cell to look into the problems of farmers related to crop and animal production and management and to impart necessary guidance and training for improvement at the grass root level.
8. Vocational Degree Courses:
The School is starting Bachelor of Vocation courses along with regular degree programme as certificate and diploma courses in Plant propagation & nursery management technologies and is also in the process of starting the same on Bee keeping, Sericulture, Mushroom cultivation, Phyto clinics, cultivation of Medicinal and Aromatic plants, Piggery, Dairy, etc.

Address for communication

Dean, School of Agricultural Sciences & Rural Development (SASRD),
Medziphema Campus, Nagaland University, Medziphema-797106

CHAPTER-VI. PLAN AND SCHEMES FOR DEVELOPMENT OF AGRICULTURE

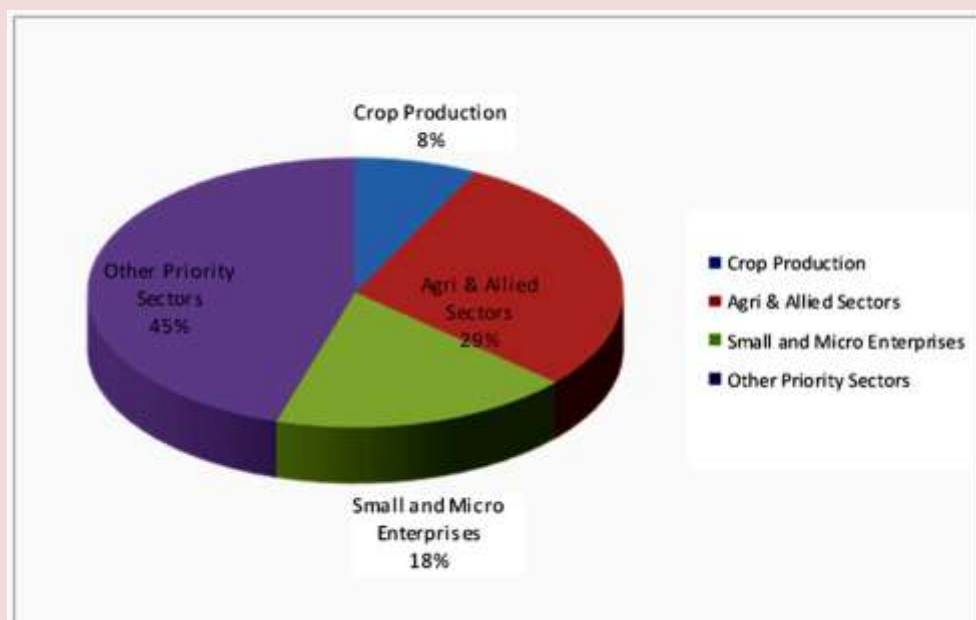
1. NABARD

i. Policy Initiatives of NABARD

1. Financing of Rural Infrastructure projects under PPP mode, through Infrastructure Financing Company Limited (IIFCL) and predominantly rural projects with urban overlap to be eligible for financing under NIDA.
2. Consortium lending for Rural Infrastructure Projects with other financing institutions engaged in infrastructure funding also to be allowed for funding under NIDA.
3. A dedicated fund, named Off farm Sector Promotion fund (OFSPF- to be effective from 01 Oct. 2014) formed by merging Rural Innovation Fund (RIF), Rural Promotion Fund (RPF) and Rural Non-Farm Sector (RNFS). The Fund to support innovations, promotional programmes, loan based activities in rural areas with a clear focus on various Off Farm Development activities, rural sanitation, housing, health, tourism, solar/bio energy, skill building, transportation, technology development, rural services etc.
4. Financial support under FITF for issuance of RuPay Kisan Cards and establishment of POS/Micro ATMs at the field level.
5. Support under FITF for Switching Fee and Interchange/ Transaction Charges for KCC transactions only on an ATM other than the parent bank. In addition, the Cooperative Banks are to be provided with ATM add-on support and data migration/feeding of PACS data to CBS platform.
6. FITF supported scheme to cater to the problems of the rural people and make them aware of the different banking options available for them. The scheme also includes demonstration of Banking Technology through Mobile Van to rural masses.
7. Setting up of “Long Term Agriculture Credit Fund” with NABARD for providing long term refinance for investment credit for agriculture & allied sector by Cooperatives and Regional Rural Banks.
8. The earlier practice of ROs of NABARD convening State Level Unit Cost Committee meetings on an annual basis has been revived. The unit costs decided in the meeting are purely recommendatory in nature.

9. Concessional rate of refinance (0.5% less than the applicable ROI from time to time) for specific innovative/thrust areas for various activities under plantation & horticulture and Area Based Schemes under banking plan.
10. Medium Term Refinance Scheme for financing agricultural products launched. The “Medium Term Product” will cover support activities in Agriculture, Plantation & Horticulture, Dairy Sector and other allied activities under agriculture.
11. Provision of term loans to State Government's under section 27 of NABARD Act, 1981 for contribution to share capital of cooperative credit institutions been revived.
12. Government of India to extend interest subvention of 2% on pre and post shipment rupee export credit extended by CBS enabled St.CBs holding AD category –I licenses on certain employment oriented export sectors upto 31 March 2014.
13. Under Tribal Development Fund, per family grant assistance cap has been increased to Rs. 50000 & Rs. 45000 in hilly/north eastern states and other states respectively from existing limit of Rs. 45000 & Rs. 40000 respectively.
14. Introduced half yearly (pre & post monsoon) performance rating of wadi projects and performance rating of PIAs during the project implementation period of TDF projects.
15. With a view to provide more flexibility to ROs, Farmers Technology Transfer Fund (FTTF) & Farm Innovation Promotion Fund (FIPF) have been merged and a separate fund namely Farm Sector Promotion Fund (FSPF) has been created.
16. Commercial Banks, DCCBs, RRBs, UCBs and NGOs/SHPIs eligible for grant assistance @Rs.2000/- per JLG for formation, credit linking and nurturing of JLGs in rural areas.
17. Good working and potentially viable PACS to be involved as SHPI and promotional grant assistance will be available upto Rs. 5000/- per SHG.
18. SHG federations involved in formation and nurturing of SHGs eligible for maximum grant assistance of Rs. 8000/- per SHG.
19. A scheme for promotion of Women SHGs in backward and LWE districts, which aims at saturating the districts with viable and self-sustainable Women

Self Help Groups (WSHGs) by involving NGOs/support agencies, is implemented across 150 backward and Left Wing Extremism (LWE) affected districts of the country for which NABARD will provide grant support @ Rs. 10,000/- per SHG.



Sector-wise PLP Projections for the year 2015-16

Table: Summary of Sector-wise PLP Projections for the year 2015-16

Sr. No.	Sector	Financial Projection
1	Crop Production, Maintenance and Marketing	1730.39
2	Water Resources	238.50
3	Land Development	150.84
4	Farm Mechanisation	298.33
5	Plantation and Horticulture	2208.86
6	Forestry & Waste Land Development	105.69
7	Animal Husbandry - Dairy Development	145.44
8	Animal Husbandry - Poultry Development	865.02
9	Animal Husbandry – Sheep, Goat and Piggery Development	2225.52
10	Fisheries	174.62

11	Storage Godowns and Market Yards	112.00
12	Renewable Sources of Energy and Waste Management	293.76
	Term loan for Agriculture (2 to 12)	6818.58
13	MSE investment and working capital	3892.50
13 (A)	Food and Agro Processing	346.50
	MSE Total	4239.00
14	Other Priority Sector	10570.00
Total Priority Sector		23357.97

ii. Government sponsored programmes under implementation with institutional credit

The GOI has introduced Credit linked Subsidy Schemes with a view to encourage capital formation under selected agriculture and allied sectors through private investments. The main features of the Scheme are as under:

Table: Features of Credit linked Subsidy Schemes

Sl. No	Name of Scheme	Nodal Agency	Objective	Subsidy quantum (range)
1	Establishment of Agri-Clinics and Agri-Business Centres (ACABC)	MANAGE & NABARD	Supplement government extension system, support agriculture development and create gainful employment opportunities to the unemployed agricultural graduates	Back ended Composite Subsidies of 44% for SC/ST/Women/NER/Hill States and 36% for others Project cost: Max. Rs. 20 lakh for individual (Rs. 25 lakh for extremely successful individual) and Rs. 100 lakh for group project (minimum 5 individual)
2	CSS for Solar Lighting and Small Capacity PV	MNRE, Gol and NABARD	Encourage installation of small capacity PV systems for lighting the	Capital subsidy of 40% as per indicated models Systems manufactured by

	Systems under Jawaharlal Nehru National Solar Mission (JNNSM) of the Ministry of New and Renewable Energy, GoI (modified w.e.f. 15/03/12)		household	companies / installed by dealers not approved by MNRE will not be eligible for coverage under the Scheme
3	CSS to instal 10,000 Solar Photovoltaic (SPV) water pumping systems for irrigation purpose (w.e.f. 01/04/14)	MNRE, GoI and NABARD	To meet irrigation requirements of land holdings for small and marginal farmers. The tentative target for Nagaland State is ten (10) units	Capital subsidy of 40% as per indicated models Only manufacturers/suppliers empanelled by MNRE, GoI can participate in the scheme
4	Dairy Entrepreneurship Development Scheme (DEDS)	DAHD & F, MOA, GOI and NABARD	To set up modern dairy farms for production of clean milk, encourage heifer calf rearing, bring structural changes in the unorganized sector to encourage initial processing of milk at the village itself and to generate employment	33.33% for SC/ST and 25% subsidy for others under various activities. For details kindly visit https://www.nabard.org/english/deds.aspx
5	Integrated Scheme for Agriculture Marketing (ISAM) with five (5) Sub schemes	DMI, SFAC, NIAM and NABARD	Create agriculture marketing infrastructure with back ended subsidy support, promote pledge financing, promote integrated value chain system, increased use of ICT, establish nationwide	33.33% for SC/ST/Women/NER/Hill States/FPOs and 25% subsidy for others under various activities. Kindly note: The DMI, GoI vide letter No. F.No.G.20015/1/2014-MII

			information network, assist in standardization of produce and promote research and consultancy in the agriculture sector	dated 6/8/14 has decided to stop sanction of subsidy, for time being, for new projects under AMI, a Sub scheme of ISAM, for remaining period of the year 2014-15
--	--	--	--	--

Address for communication

General Manager
NSCB building, IV Floor,
Kharmahal, Dimapur – 797 112

2. Rubber Board

The Department, headed by the Rubber Production Commissioner is responsible for planning, formulation and implementation of schemes for improvement and expansion of rubber cultivation and production. Extension/advisory service, supplies of inputs, demonstration and training for small growers etc. are also undertaken by the RP Department.

The important development schemes and activities undertaken through the Department are the following:

1. Rubber Plantation Development Scheme.
2. Production and distribution of improved planting materials.
3. Advisory and extension services to growers.
4. Demonstration of scientific planting and production.
5. Supplies of equipment and materials requiring popularization.
6. Identification of non-traditional areas suitable for rubber cultivation and planning and undertaking activities for its promotion in such areas.
7. Schemes for improvement of quality of small holders of rubber estates.
8. Block planting, group planting etc. for promotion of rubber among members of scheduled caste/scheduled tribe.

9. Promotion of Self Help Groups (SHGs) and Rubber Producers' Societies (RPSs) among small growers.
10. Training of tappers and growers
11. Arranging insurance cover for Rubber estates.
12. Promotion of Rubber cultivation among Scheduled caste / Scheduled Tribe (SC/ST) through Block planting, Group planting schemes

Address for communication

Development Officer
NSCB building, III Floor, West Wing
Khermahal, Dimapur – 797 112
Phone- 03862 – 236097
E-mail: rodmp@rubberboard.org.in

3. National Food Security Mission (NFSM)

i. Objective:

1. Increasing production of rice, wheat, pulses and coarse cereals through area expansion in a sustainable manner in the identified districts of the country.
2. Restoring soil fertility and productivity at the individual farm level.
3. Enhancing farm level economy (i.e. farm profits) to restore confidence among the farmers.

ii. Salient features:

1. Focus on low productivity and high potential districts including cultivation of food grain crops in rain fed areas.
2. Implementation of cropping system centric interventions in a Mission mode approach through active engagement of all the stakeholders at various levels.
3. Agro-climatic zone wise planning and cluster approach for crop productivity enhancement.
4. Focus on pulse production through utilization of rice fallows, rice bunds and intercropping of pulses with coarse cereals, oilseeds and commercial crops

(sugarcane, cotton, jute).

5. Promotion and extension of improved technologies i.e. seed, Integrated nutrient management (INM) including micronutrients, soil amendments, integrated pest management (IPM), input use efficiency and resource conservation technologies along with capacity building of the farmers/extension functionaries.
6. Close monitoring of flow of funds to ensure timely reach of interventions to the target beneficiaries.
7. Integration of various proposed interventions and targets with the district plan of each identified district.

Constant monitoring and concurrent evaluation by the implementing agencies for assessing the impact of the interventions for a result oriented approach.

4. Rashtriya Krishi Vikas Yojana (RKVY)

i. Objectives: To incentivize the States to increase investment in Agriculture and allied sectors to achieve 4% growth in agriculture sector.

ii. Salient Features: The outlay of the Scheme for the 11th Five Year Plan was Rs.25000.00 crore and for 12th Plan is Rs.63246.00 crore. The scheme requires the States to prepare District and State Agriculture Plans. States will be eligible for receiving RKVY funds only if the baseline share of expenditure of the Agriculture and allied sectors in its total State Plan (excluding RKVY fund) is at least maintained and the District Agriculture Plan and State Agriculture Plan have been formulated by the State Government. The States have been provided flexibility and autonomy in the process of selection, planning, approval and execution of schemes. Since RKVY is a State Plan Scheme, being implemented by the States, the respective States are required to take appropriate steps for identification of the projects that are important for agriculture, horticulture and allied sector development. The State Level Sanctioning Committee (SLSC) constituted under the Chairmanship of the Chief Secretary of the concerned State Government is empowered to approve the projects under RKVY. Funds are released to State Governments for implementation of the projects approved by the State Level Sanctioning Committee (SLSC). The funds under the scheme are provided to the States as 100% grant. From the financial year

2014-15 of XIIth plan 35% each of the annual outlay of RKVY funds is earmarked to the States for Production Growth and Infrastructure development and 20% of annual outlay is reserved for special schemes of focused interventions (sub-schemes) and remaining 10% as flexi-fund which can be utilized by the States either for Production Growth or for Infrastructure & Assets development projects depending upon State specific needs/priorities. RKVY funds are routed through State treasury and the State Agriculture Department, which is the nodal Department for implementing of RKVY in the States.

5. National Mission for Sustainable Agriculture (NMSA)

i. Objectives: To promote water use efficiency, soil health/nutrient management and livelihood diversification through integrated farming in rainfed areas; to make agriculture more productive, sustainable, remunerative and climate resilient by promoting location specific integrated/Composite Farming Systems; to conserve natural resources through appropriate soil and moisture conservation measures; to adopt comprehensive soil health management practices; to optimize utilization of water resources through efficient water management, to expand coverage for achieving more crop per drop; to develop capacity of farmers & stakeholders in conjunction with other on-going Missions; to pilot models in select blocks for improving productivity of rainfed farming by mainstreaming rainfed technologies; to establish an effective inter and intra Department/Ministerial co-ordination for accomplishing key deliverables of National Mission for Sustainable Agriculture under the aegis of National Action Plan on Climate Change(NAPCC).

ii. Salient Features: Promoting Integrated Farming Systems (IFS); Popularizing Resource Conservation Technologies; Promoting effective management of available water resources and enhancing water use efficiency; Encouraging improved agronomic practices; Creating database on soil resources; Promoting location and crop specific integrated nutrient management practices; Involving knowledge institutions and professionals in developing Climate Change adaptation and mitigation strategies; Promoting interventions in select blocks as pilots for ensuring integrated development through dissemination and adaptation of rainfed technologies; Establishing platform to liaison, review and coordinate implementation of interventions outlined in Mission Document of NMSA under aegis of NAPCC.

6. National Mission on Oilseeds and Oil Palm (NMOOP)

Objectives:

i. Mini Mission-I on Oilseeds: To achieve production of 35.51 million tones and productivity of 1328 kg/ha. of oilseeds from the present average production & productivity of 28.93 million tones and 1081 kg/ha.

ii. Mini Mission-II on Oil Palm: To bring additional 1.25 lakh hectare area under oil palm cultivation through area expansion approach in the States including utilization of wastelands with increase in productivity of fresh fruit bunches from 4927 kg per ha. to 15000 kg per ha.

iii. Mini Mission-III on Tree Borne Oilseeds (TBOs): To enhance seed collection of TBOs from 9 lakh tones to 14 lakh tones and to augment elite planting materials for area expansion under waste land.

Salient features:

Mini Mission-I on Oilseeds: Production of breeder seed, purchase of breeder seed / parental lines (for production of hybrid seed), production of foundation seed and certified seed, distribution of certified seed, distribution of minikit (varietal diversification), seed infrastructure development, variety specific targeted seed production (VSTSP), plant protection equipments including eco friendly light-trap (NCIPM Model) and seed treating drum, plant protection chemicals, distribution of gypsum/pyrite/ liming/dolomite/single super phosphate etc, nuclear polyhedrosis virus(NPV), supply of rhyzobium culture/ phosphate solubilising bacteria (PSB)/Zinc solubilising bacteria(ZSB)/ azatobactor/ mycorrhiza etc, supply of Improved farm implements, distribution of sprinkler set, pipes for carrying water from source to the field, seed storage bins, block demonstrations, block demonstrations on polythene mulch technology in groundnut, frontline demonstrations, frontline demonstrations on polythene mulch technology in groundnut, integrated pest management (IPM), farmers training, officers/Extension workers training (Input dealers included), contract research, local initiatives, contingency including monitoring & evaluation and

operational costs including consultancy services. Exposure visits of farmers/ Seminar/ Conference/Tilhan mela etc.

Mini Mission-II on Oil Palm: Planting material, maintenance cost, drip irrigation, distribution of pump sets, bore well at oil palm farm / water harvesting structure /ponds. Establishment of seed gardens, inputs for intercropping in oil palm, construction of vermi-compost units at oil palm fields, machinery & tools, special component for NE/Hilly States/Left Wing areas/regions including support for oil palm processing units, farmers' training, training of extension workers/ officers/input dealers, demonstrations, research & development (R&D) schemes, training infrastructure support to ICAR, local initiatives, contingency including monitoring & evaluation and operational costs including consultancy services. Exposure visits of farmers/ Seminar/ Conference etc.

Mini Mission-III on Tree Borne Oilseeds (TBOs): Integrated development of Nurseries & plantation on the new wasteland as well as existing wasteland/ degraded forest land, maintenance of TBO plantations from 2nd year of plantation till gestation period, incentives for undertaking intercrops with oilseeds, pulses and other crops during gestation period, research and development on TBO, distribution of pre-processing, processing and oil extraction equipments, support to TRIFED / NCDC, farmers training, officers/ extension workers/input dealer training, local initiatives, contingency including monitoring, evaluation, operational costs, exposure visits of farmers, Seminars, Conferences, Melas etc.

7. Integrated Pest Management (IPM)

The thrust of the scheme will be on biocontrol measures from a long-term perspective. The main objectives of the scheme are: 1.To keep pests and diseases of crops below Economic Threshold level by adopting an integrated pest management practice. 2. Constant pest surveillance and monitoring to ascertain pest population 3.Creating awareness among farmers on the prominent pests and diseases, which cause severe damage to crops and suggest measures to prevent them. The total outlay of the scheme is Rs. 50.00 lakh.

Address for communication

District Agricultural Office,

8. Spice Board

Spices Board was constituted on 26th February 1987 under the Spices Board Act 1986 (No. 10 of 1986) with the merger of the erstwhile Cardamom Board (1968) and Spices Export Promotion Council (1960). Spices Board is one of the five Commodity Boards functioning under the Ministry of Commerce & Industry. It is an autonomous body responsible for the export promotion of the scheduled spices and production development of some of them such as Cardamom

9. Mission for Integrated Development of Horticulture (MIDH)

i. Objectives:

1. Stimulate holistic growth of horticulture sector through area based regionally differentiated strategies involving technology promotion, extension, post harvest management (PHM), processing and marketing in consonance with comparative advantage of each State/region and its diverse agro-climatic features;
2. Leverage economies of scale and scope by aggregating demand and consolidating supply through farmer groups/ producer companies / organizations.
3. Create production clusters and hubs to facilitate setting up of infrastructure facilities for processing, post harvest management and exports.
4. Improve productivity by way of quality germplasm, planting material and water use efficiency through micro irrigation.
5. Support skill development and create employment generation opportunities for rural youth in horticulture and post harvest management, especially in the cold chain sector.
6. Enhance horticulture production, augment farmers income and strengthen nutritional security.

ii. Salient Features:

1. Adoption of an end-to-end holistic approach covering pre-production, production, post harvest management, processing and marketing to assure appropriate returns to growers/producers.
2. Promotion of R&D technologies for cultivation, production, post-harvest management and processing with special focus on cold chain infrastructure for extending the shelf life of perishables.
3. Improve productivity by way of quality through:
 - a. Diversification from traditional crops to plantations, orchards, vineyards, flowers, vegetable gardens and bamboo plantations.
 - b. Extension of appropriate technology to farmers for high-tech horticulture including protected cultivation and precision farming.
 - c. Increase of acreage of orchards and plantation crops including bamboo and coconut, particularly in States where total area under horticulture is less than 50% of agricultural area.
4. Improve post harvest management, processing for value addition and marketing infrastructure;
5. Adoption of a coordinated approach and promote partnership, convergence and synergy among R&D processing and marketing agencies in public as well as in private sectors, at national, regional, State and sub-State levels;
6. Promotion of FPOs and their tie-ups with Market Aggregators (MAs) and Financial Institutions (FIs) to support adequate returns to farmers;
7. Support capacity-building and Human Resource Development at all levels, including, change in syllabus and curriculum of graduation courses at Colleges, Universities, Polytechnics, as appropriate;
8. Small and marginal farmers will remain an important target group for production improvement programmes, whereas infrastructure related activities would be taken up by FPOs/FPCs, corporate bodies & other entrepreneurs.

10. Integrated Watershed Development Programme (IWMP): it is a modified programme of erstwhile Drought Prone Areas programme (DPAP), Desert Development Programme (DDP) and integrated Wasteland Development programme (IWDP) of the department of land resources. This consolidation is for optimum use of resources, sustainable outcome and integrated planning. The

scheme was launched during 2009-10. The programme is being implemented as per common guideline for Watershed Development Projects 2008. The main objective of the IWMP are to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water. The outcomes are prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. This enables multi-cropping and the introduction of diverse agro based activities, which help to provides sustainable livelihoods to the people residing in the watershed area.

10.1 The salient features of IWMP are as below:

- i. Setting up of dedicated institutions with multi-disciplinary experts at State level – State level Nodal Agency (SNLA) District level – Watershed cell cum data Centre (WCDC), Project Level – Project Implementing Agency (PIA) and Village Level – Watershed committee (WC).
- ii. Cluster Approach in selection and preparation of projects: Average size project – about 5,000 ha.
- iii. Enhanced Cost norms from Rs 6000 per ha. to Rs 12,000/ha in plains Rs 15,000 in difficult/hilly areas
- iv. Uniform Funding pattern of 90:10 between Centre and states.
- v. Release of central assistance in three instalments (20%, 50%, 30%) instead of five instalments.
- vi. Flexibility in the project period i.e. 4 to 7 years.
- vii. Scientific planning of the project by using IT, remote sensing techniques, GIS facilities for planning monitoring and evaluation.
- viii. Earmarking of project funds for DPR preparation (1%), Entry point activities (4%), Capacity building (5%), Monitoring (1%) and evaluation (1%).

CHAPTER-VIII. ANNEXURE

Telephone directory of important persons in agriculture and related departments/offices in Dimapur District

Sl. No	Name	Designation	Mobile/Phone
1	Bendangtemsu	DAO	9436265988
2	Eyangol Natso	DHO	9856051136
3	Hovuto	DSCO	9436431042
4	Dr. Temsumeren	CVO	9436006684
5	Dr. Asenuo Linyu	Dy. CVO	9436002184
6	Dr. Nsangthung	Principal VFATI	8118953068
7	Dr. Imomanen	DLDO	9436002353
8	Dr. Ilang	DDDO	9436000685
9	Dr. Inato	Dy. Director	9436072326
10	Dr. Asangla	Vety. Surgeon	9436017827









Staff information

Sr . N o.	Name of Staff	Designation	Area & Discipline of Work	CORRECT & Valid Contact Number	Email address
	Dr. Anamika Sharma	Programme Coordinator	Agri & allied	+919436433005	kvkdimapur@gmail.com
	Shri. H.D.Singh	SMS (Horticulture)	Horticulture	+919436075196	-
	Mrs. V.Kenny	SMS (Home Science)	Home Science	+919436406047	-
	Shri. Kolom Rabi	SMS (Plant Breeding)	Plant Breeding	+919436803811	Rabikolom@yahoo.com
	Dr. Ebibeni Ngullie	SMS (Animal Science)	Animal Science	+918730087175	Ebibeni_300880@rediffmail.com
	Shri. Z.James Kikon	SMS (Soil Science)	Soil Science	+919612902239	Kikon_james@yahoo.com
	Shri. Ch.Roben Singh	SMS (Agronomy)	Agronomy	+919856134698	Chongtham45@yahoo.co.in
	Dr. Ratnakar Singh Patel	Lab Assistant T-4	Horticulture	+919436108612	Ratnakar.patel@gamil.com
	Shri. Imliakum Pongen	Programme Assistant (T-4) (Farm Management)	Farm Management	+919436831452	Pongenimli13@gmail.com
	Shri.	Programme	Computer	+919615607	Mawthoh@gmail.com

	Pynshail ang Mawthoh	Assistant (T-4) (Computer Application s)	Application s	216	
	Shri. B. P Dey	Accountant / Superinten dent	Accountant	+919435543 697	-
	Miss. Abuno Miasalho u	Junior Stenograph er cum computer operator	Administrat ion	+918575925 732	abunomiasalhou@yahoo. com
	Shri. Methasel Kweho	Driver cum mechanic	Driver	+919856302 314	-
	Shri. Kailash Sharma	Cook	Cook	+919436263 772	-



Group photo of staffs, kvk Dimapur

DISCLAIMER:

Information in this e-publication is compiled from various secondary sources by subject experts i.e. KVK professionals in district and compiled by editors. The information in this book is meant to supplement the working knowledge of development stakeholders in North Eastern Districts. The e-publication contains information about [district information], the information is not advice, and should not be treated as such. Editors are not responsible for any mistake or lacuna or plagiarism in this e-publication as information is compiled by KVKs from secondary sources. This e-publication is only for academic/developmental purposes, and not for commercial use. The main idea behind this e-publication is creating awareness and sharing information. Although the editors and publisher have made every effort to ensure that the information in this book was correct at publishing time, the editors and publisher do not assume and hereby disclaim any liability to any party for any loss, damage, or disruption caused by errors or omissions, whether such errors or omissions result from negligence, accident, or any other cause. This is pre-publication copy, uploaded to be reviewed by authors and peers.



