

SOUTH TRIPURA DISTRICT

Inventory of Agriculture 2015



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2015



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



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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 South Tripura for taking part in compiling the huge information to shape up South Tripura 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 South Tripura 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



The Inventory of Agriculture of South Tripura District is prepared in intention to provide a foundation for useful information and a support system for the development of agricultural and allied sectors of South Tripura district. It is expected to be useful to different stakeholders, starting from policy planners to farming community, including every concern agencies, administrative personnel, researchers, and students who are directly or indirectly involved with the development of agricultural and allied sectors in the district. The basic information on the district's profile, agricultural scenario, important contact details, available schemes and programmes for farmers is available in scattered form from different sources. But this inventory of Agriculture of South Tripura will act as a common and precise flat form of information for all the concerns. As far as the farming community is concerned, getting information on their specific needs is still a herculean task. Information sharing with farmers would help them to technically advance in their farm-related activities. It is our own experience that a majority of the farming community is unaware of the programmes and schemes framed for them by the Governments and leading to failure of such programmes. Non adoption of modern field technologies by a larger group is another evil due to poor sharing of information. In the present day, information is percolated only to a handful of farmers who are resource-rich and highly progressive. The agricultural economy of the country can improve only when modern technologies are largely adopted by the farming community through exchange of information. It is also noted that a number of farmers are unaware about the various institutions and organizations engaged in agricultural research and development activities in their own localities. In this publication, concerted effort has been made to compile all the available information on

various research and development organizations relevant to the district's agriculture. The inventory has also provided the services and schemes offered by the organizations along with addresses for communication. We are fully aware about the importance of updating the contents periodically to include changes that are likely to happen due to policy changes. I assure to include such information in our future editions of this publication that might have been omitted in the present compilation. I place on record sincere gratitude to all the staffs of KVK, who have directly or indirectly contributed to compile it in its present form. I express sincere thanks to the Director (ATARI, Zone – III) for his constant encouragement to bring out this publication. I also note gratitude to Director, ICAR research Complex for NEH Region, Joint Director, ICAR Tripura Centre, different departments of agricultural allied sector, Govt. of Tripura and other officials for providing the necessary information. I dedicate this publication to the cause of the farming community of South Tripura District and I will be happy if suggestions are made by the users for further improvement.

(Tayeb Ali khan)

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CHAPTER-I. DISTRICT IN GENERAL

The South Tripura District with its Head Quarter at Belonia was created with the objective of ensuring better delivery of public services to a population of 4, 53,079, a major chunk of whom live in rural areas. The district has 3 Sub-Divisions, 6 RD Blocks, 2 Nagar Pachayats, 90 Grampanchayats (GPs) and 70 ADC Villages. The total geographical area of the District is 1514.322 Sq. Km.

Although the district is situated in the southern most tip of the State, it has the advantage of being connected with the State Capital through National Highway 44. The project for extension of railway line up to Sabroom town via Belonia would further improve the transportation and communication link with the rest of the State. Efforts are being made to connect the unconnected habitations by all weather roads as early as possible.

While Trishna Wildlife Sanctuary under Rajnagar Block and Pilak under Jolaibari have the potential to become major tourist attractions, Belonia and Sabroom Towns have the potential to become major export-import hub.

The District Administration along with all the line departments will have to work together and focus on filling up the gaps in infrastructure as well as service delivery system so that the objective with which the new district was created could be fulfilled.



Fig: Location Map of South Tripura District

CLIMATE

Climate of South Tripura district is characterized by a humid summer and a dry cool winter with high rainfall during July to October. The annual rainfall of the districts ranges from 2000 to 2200 mm. The monsoon generally breaks out by the end of May and continues till October. Maximum rainfall occurs during the month of June –July and the minimum during December-January. The districts experiences winter and summer showers to a limited extend. Hail storm generally during the month of April and May, occasionally causing damage to the field crops. Autumn and spring are of very short duration.

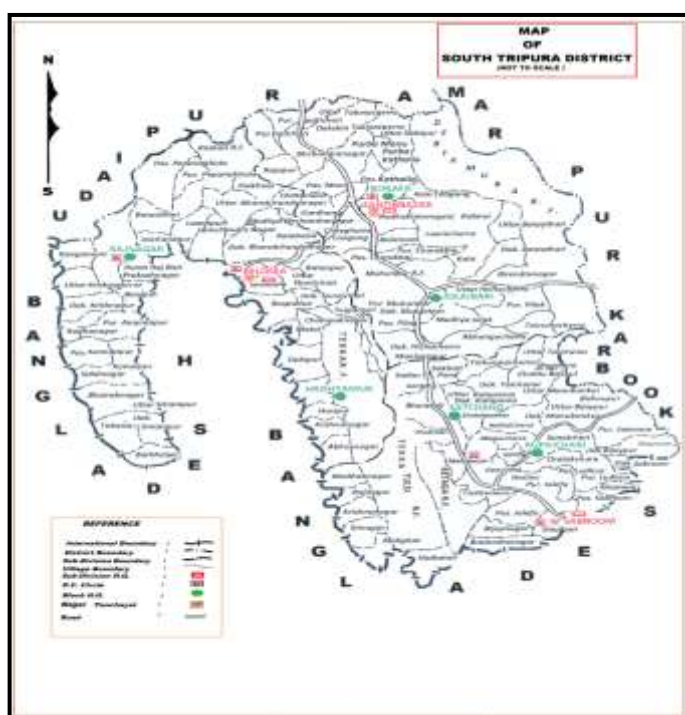


Fig. 1 b. South Tripura district

South Tripura has hot and humid climatic condition with an average of about 70 to 80% of relative humidity throughout the year and the temperature varies between a maximum of 35⁰C and minimum of 7⁰C. The weather data for the year 2014 is given in table.

Table: Climate of South Tripura District

Month	Rainfall (mm)	Temperature ⁰ C		Relative humidity	Evaporation (mm)	Sunshine hrs	Wind speed
		Minimum	Maximum				
January	0.00	25.2	10.1	102.2	5.9	0.4	61
February	8.20	27.9	12.3	97.4	6.4	0.6	63
March	2.80	32.3	17.9	113.1	7.6	0.8	70
April	44.8	35.9	25.1	106.7	7.9	1.1	82
May	384.2	34.4	25.2	109.5	7	2.0	84
June	575.8	32.4	25.4	97.6	2.2	3.0	89
July	241.0	32.7	25.4	104.9	3.8	7.6	87
August	548.6	31.6	25.2	106.1	4.3	6.3	89
September	281.2	31.6	24.9	102.8	4.9	7.1	88
October	29.8	32.1	23.3	93.4	7.2	1.8	90
November	37.4	29.8	17.4	101.9	6.8	1.3	81
December	0.00	25.7	13.1	100.8	4.4	1.7	77

Source: Dept. Of Agriculture, Govt. of Tripura and KVK (ICAR), South Tripura.

TOPOGRAPHY

The district falls under agro-climatic zone III, having humid dissected mounts and valleys with sub-humid denuded hill of varying altitude. Physiography of the district may be divided into nine physiographic units' viz. high relief, medium relief, low relief, flat topped, residual, undulating plain, flood land, alluvial plain and interhill valley. The terrain in South Tripura consist of parallel hills and ridges alternated with narrow valleys. Major area in the district has an elevation below 100 m where the slope is less than 10m/km.

While parts of Rupaichari block have elevation between 100 to 300m from the mean sea level, few areas also have an elevation of more than 300 m. the slope in those areas varies from 10 to 30 m/km. various areas of Rajnagar, Hrishyamukh and the some parts of Bokafa have humid, moderately dissected, mouth and valley and other block like rupaichari have Subhumid denuded hills.

The uplands are moderately eroded and mostly under degraded forest where is the valleys are gently sloping, slightly eroded, poorly drained and mostly under cultivation.

FORESTS

Table: Details of forest in South Tripura District

Parameters	Particulars
Total Forest area (sq.km.)	1200.38
Unclassified Government Forest (sq. km.)	315.30
Reserve Forest (sq.km.)	614.41
Protected Reserve Forest (sq.km.)	239.88
Protected Forest (sq. km.)	30.79
Claims received	-
Forest Rights vested	22678
Community claims received	31
Community claims approved	31
Number of Divisional Forests Office	02
Number of Range Office	10

(Source: District Administration, Govt. of Tripura)

WATER RESOURCES

The district is endowed with good water resources with three perennial rivers. In addition, there are so many streams flowing from the hills contributing to the water resources. An estimated 7 lakh hectare-metre of rain water flows through the state annually. The water table is fairly good from which ground water can be drawn for agriculture and domestic purposes through tube wells, deep tube wells, small pumps and shallow wells.

a. Rivers: 4 numbers of rivers covering water area of 1909 ha namely Feni, Muhuri, Manu, & Lowgang are in the district whose lengths are 86.80 km, 56 km, 69.04 km & 16 km respectively.

b. Streams: There are 22 numbers of streams available in the district. The total length of all the streams is 296.06 km. The names of streams are Abhoyacherra, Balujurycherra, Mandariacherra, Beloniacherra, Manucherra, Magroomcherra, Sabroom cherra, Chikan cherra, Kukicherra, Rajboracherra, Ludhuacherra, Aliamara cherra, Chalitacherra, Sonaicherra, Riupaicherra, Manucherra, Baikuracherra, Manucherra, Betagacherra, Takmacherra, paticharicherra, Amcharacherra.

c. Beels/Lakes: The ponds and lakes available in the district is 1570 ha which can be used for irrigation.

PORTS

Nil.

DEMOGRAPHY

Table: Population and literacy figures in South Tripura district as per 2011 census

Parameters	Particulars
<i>Total population *</i>	4,53,079 Nos.
Male	2,34,118 Nos.
Female	2,18,961 Nos.
SC Population (No. and % of total population)	74,020 Nos. (16.33%)
ST Population (No. and % of total population)	1,62,463 Nos. (35.85%)
Rural Population (in lakh)	4,14,426 Nos.
Urban Population (in lakh)	38,653 Nos.
Population Density (Ratio)	299 per Sq. Km.
Sex Ratio	935 Female per 1000 Male
Literacy Male (in percentage)	93.39%
Literacy Female (in percentage)	79.54%
Literacy Total (in percentage)	85.09%
Total geographical area (in Sq. Km.)	1514.3 Sq. Km.

(Source: District Administration, Govt. of Tripura)

CULTURE AND EDUCATION

Mixed culture prevails, as there are both Bengali and Tribal people inhabited in the district.

Education

Parameters	Particulars
Anganwadi Centre (No.)	1291
Children covered (No.)	42307
Mother Covered (No.)	9926
Primary School (No.)	336
Senior Basic School (No.)	155
High School (No.)	90
H.S. (+2) School (No.)	55
General Degree College and students capacity (No.)	03 Nos., Belonia-3000 Nos., Sabroom-600 Nos., Santirbazar-200 Nos, 95 Admitted.

Technical & Vocational Institutions

Parameters	Particulars
Agricultural College and students capacity (No.)	Nil
Fisheries College and students capacity (No.)	Nil
Music College and students capacity (No.)	Nil
Bachelor of Education(B.Ed.) College and students capacity (No.)	Nil
Basic Training (B.T) College and students capacity (No.)	Nil
Industrial Training Institute (ITI) and students capacity	1 No. at Sarashima ,

(No.)	Belonia Capacity of 155 Nos.
Polytechnic and students capacity (No.)	Nil
University and students capacity (No.)	Nil
National Institute of Technology(NIT) and students capacity and students capacity (No.)	Nil

HEALTH CARE SECTOR

Indicator	Number	Bed
Health Sub-Centre	150	Nil
Primary Health Centre	16	144 Nos. (12 Nos. Observation Bed)
Community Health Centre	04	110 Nos.
Sub-Divisional Hospital	02	175 Nos.
District Hospital	Nil	Nil
Medical College (No.)	Nil	
Nursing College (No.)	Nil	
Para-medical Institute (No.)	Nil	

BANKING AND ALLIED SECTOR

Parameters	Particulars
Tripura Grameen Bank (TGB)	19
Tripura State Co-op. Bank. (TSCB)	08
United Bank of India (UBI)	09
State Bank of India (SBI)	07
Credit Deposit Ratio	42%

LOCAL BODIES AND RURAL DEVELOPMENT

The panchayats are the administrative blocks at the grass root level and enjoys full freedom in planning and developing the area under its jurisdiction. They are also known as the Local Self Government. The municipality of Belonia take care of the developmental programmes. The details of the administrative units are as follows:

Revenue division: South Tripura

Sub Division : 3 nos

Gram panchayats: 90 nos

Nagar Panchayats wards: 34nos

ADC Villages: 70nos

Revenue village: 138nos

Habitations: 1326nos

The location of panchayats are shown in fig.

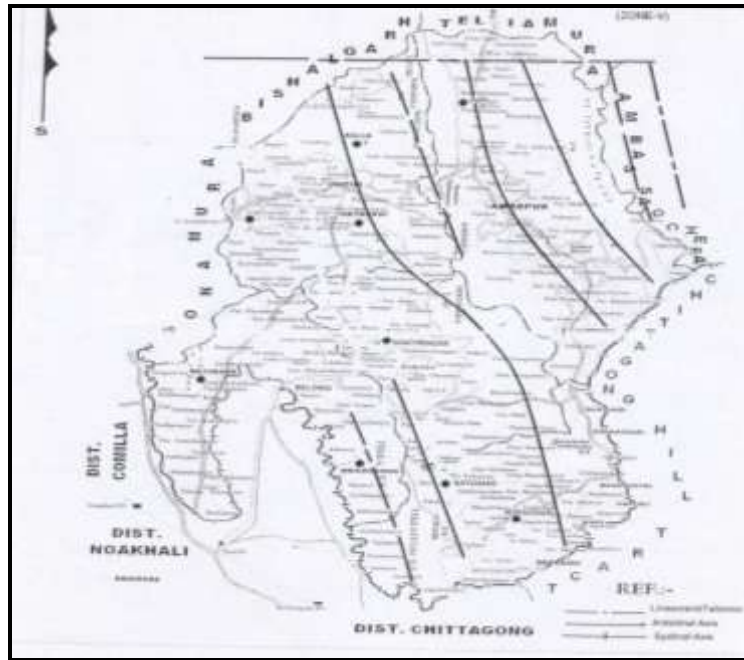
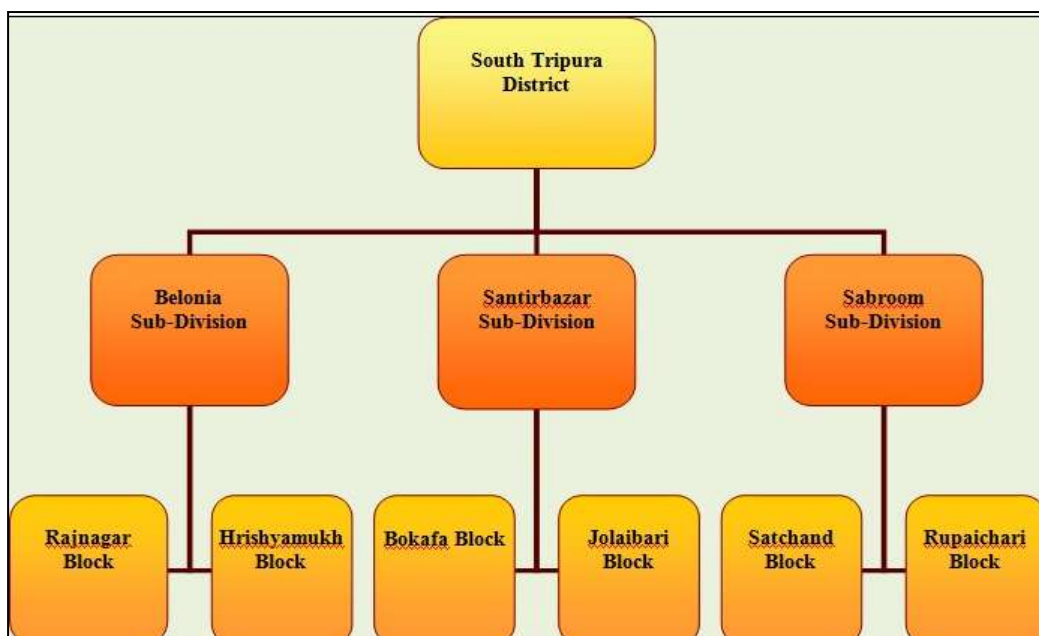


Fig: Location of Panchayats in South Tripura Districts
ADMINISTRATIVE SETUP OF SOUTH TRIPURA DISTRICT



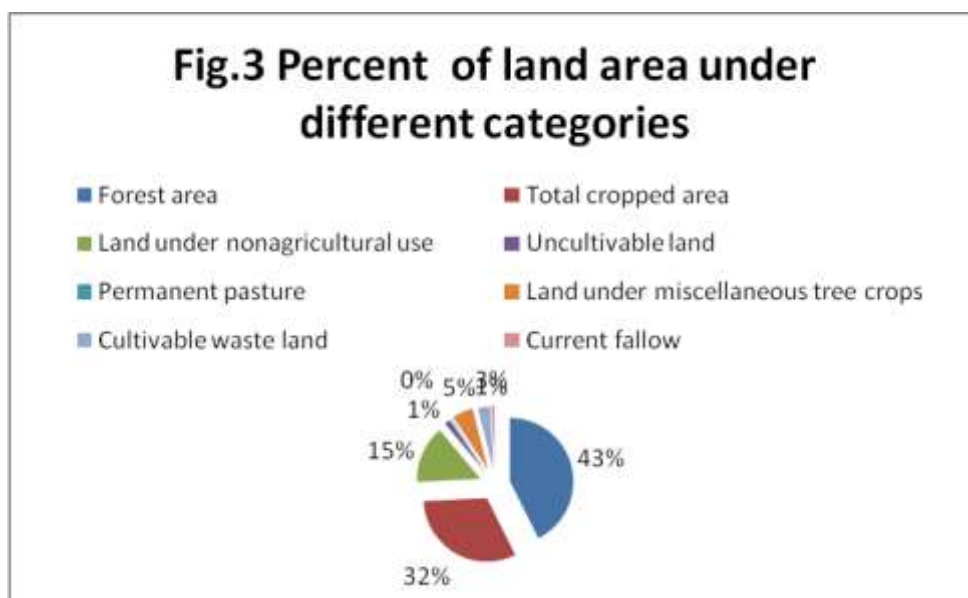
CHAPTER-II. AGRICULTURAL SCENARIO OF THE DISTRICT CROPS

The district has significant bearing on the agricultural performance at the state level. Productivity level of many major crops is at par with or even more than national average. It contributes about one third of the total food grain production in the state. About 30% of pulses and 25% oilseeds of total production in the state come from South Tripura District. Evidently the districts agriculture has a paramount role to play in the food production and food security of the state. The net sown area of the district is about 27% of the geographical area whereas the area under forest cover is more than 49% which indicates the importance of both agriculture and forestry in the district.

Table: Land use pattern of South Tripura District

Classification of land	Area (ha)
Total geographical area	148566.75
Forest area	120038
Total cropped area	72685
Net sown area	41840
Area sown more than once a year (in ha)	24647 Ha.
Land under nonagricultural use	21794.31
Uncultivable land	2187
Permanent pasture	392.39
Land under miscellaneous tree crops	7951.76
Cultivable waste land	4724
Current fallow	475

(Source: Dept. of Agriculture, Govt. of Tripura)



The contribution of South Tripura district in the total production of the state in respect of major crops is given in Table-A

Table: Contribution of South Tripura to State's food basket (production in MT)

Name of the crop	Total production in Tripura	Total production in South Tripura district	% contribution to State's production
Food grain	637000	205726	33
Oilseeds	3029	740	25
Pulses	5287	1596	30

(Source: Dept. of Agriculture, Govt. of Tripura)

Major crops of the district

The major crops grown in the district are rice, maize among the cereals, black gram, green gram, pea, red gram among pulses, sesamum, mustard, groundnut, among oilseed, Jute and mesta among fibre crops, potato, sugarcane etc. as cash crops. The available estimates of agricultural production for 2014-15 are given below:

**Table: Area, Production and Productivity of major crops cultivated in the district
(2014-15)**

Sl. No	Crop	Area (ha)	Production (ton)	Productivity (MT/ha)
1.	Jhum rice	3503	3627.00	1.035
2.	Aus rice	3321	8686.230	2.615
3.	Aman rice	43129	150066.520	3.479
4.	Arhar	739	534.12	0.722
5.	Maize	971.0	978.55	1.007
6.	Groundnut (Kharif)	53.0	55.41	1.045
7.	Sugercane	414.0	20093.800	48.535
8.	Sesamum	897.0	555.52	0.619
9.	Kharif pulses	955.0	764.980	0.801
10.	Rape seed and mustard	768.0	628.685	0.818
11.	Wheat	19.2	45.034	2.345
12.	Potato	2814	52749.796	18.745
13.	Rabi pulses	1042.5	829.870	0.796
14.	Boro rice	23530.0	81696.813	3.472

(Source: Dept. of Agriculture, Govt. of Tripura)

Input management

Seeds

The agriculture department grows seeds in the eight seed farms of the district having an area of 125 ha. Certified seeds are being provided from these seed farms of the agriculture department. ICAR and KVKs also distribute seeds to the farmers under Front Line Demonstration Programme. The farmers are also being encouraged to grow certified seeds under seed village programme. Present seed replacement rate(SRR) is highest in oilseeds (51%) followed by rice (34%), and pulses(22%).

Fertiliser

In addition to use of organic manures the farmers are using fertilizer to meet the nutrient need of the crop. Fertiliser is made available to farmers through private agencies. The consumption of fertilizer during 2014-15 is given below:

Table: Fertiliser consumption in the district (2014-15)

Fertilizers*	Urea	3822
	DAP	601
	Potash	1274
	SSP	2582
	RP	527
	Other complex fertilizers (specify)	--
	Total	8806000 kg/147687ha = 60 kg/ha

(Source: Dept. of Agriculture, Govt. of Tripura)

Jhum or shifting cultivation

This is an age old agricultural practice of the tribals of South Tripura district. The topographical situations of the land of South Tripura have made people bound to continue this subsistence farming method. Jhuming requires a very minimum capital investment that can easily be borne by the tribal families. In South Tripura district , the population of Jhumia families are about 4,589 and area under Jhum is 16050 ha.

Cropping pattern of the South Tripura District

Farmers of the district grow a variety a crops in the district. The major crops grown in the district are rice, maize, arhar, blackgram, greengram, pea sesamum, mustard, groundnut, toria, sugarcane etc. Cropping system of the district is mainly rice based. Rice is cultivated in all the three seasons namely Aush, Aman and Boro. Jhum rice is cultivated only in aush, in rainfed condition.

Marketing channels in agricultural sector

There is no separate wing for agricultural marketing at district level. There are six regulated markets in the district besides other rural bazaar namely Silachari, Kalshi, Barpathari, Santirbazar. Sometimes they sell their produce in the nearby bazaar only. Sometimes they sell their produce through middleman. There are 21 AMPS, 52 PACS and 4 marketing society in the district with limited storage capacity for seeds, fertilizers and other agricultural inputs. Distress sale of both agriculture and horticulture produce by the farmers at crumbling prices during the peak harvest season demands development and strengthening of post harvest facility like godown and market yards. Creation of these facilities in the district will help farmers to get stable prices of their produce. Large scale processing, milling, oil expeller unit is to be established at block level. Market integration system in respect of demand and supply at block is also very much important for the district. With regard to storage of the agriculture produce there are 3 nos. of cold storage viz. satchand cold storage, baikhora cold storage, belonia cold storage. The capacity of satchand cold storage is 1000 MT, baikhora cold storage is 2000 MT and belonia cold storage is 2000 MT.

Irrigation

It has been estimated that 26% of the cultivable land is under assured irrigation system. The remaining 74% of area are cultivated under rainfed condition. Lift irrigation is the main source of irrigation (50%). Diversion and other system of irrigation covers 36% of the total irrigated land.

Table: Area under irrigation and sources of irrigation of the district is given in detailed:

Irrigation	Area ('000 ha)		
Net cultivated Area	84.101		
Net irrigated area	23.646		
Gross cultivated area	147.687		
Gross irrigated area	89.226		
Rainfed area	60.455		
Sources of Irrigation	Number	Area ('000 ha)	% of total irrigated area
Canals (medium and minor)		0.080	0.76
Tanks	939	1.396	5.90
Open wells	68	0.345	1.45
Bore wells	1281	1.570	6.63
Lift irrigation schemes	451	11.799	49.89
Other sources (please specify) WHS	-	8.456	35.76
Total Irrigated Area	-	23.646	100
Groundwater availability and use* (Data source: State/Central Ground water Department /Board)	No. of blocks/ Tehsils	(%) area	
Over exploited	Nil	Nil	
Critical	Nil	Nil	
Semi- critical	Nil	Nil	
Safe	All	100	

(Source: Dept. of Agriculture, Govt. of Tripura)

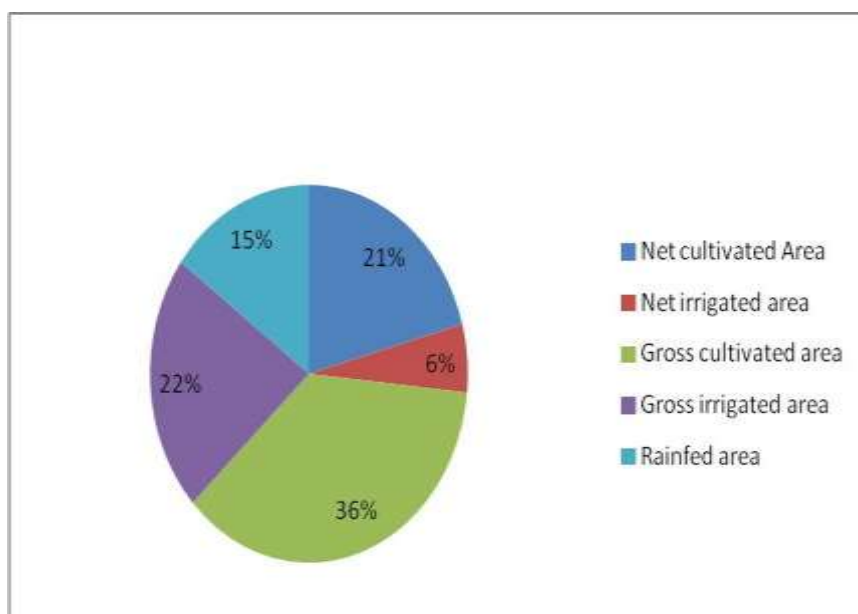


Fig: Cropped area under irrigation in South Tripura District

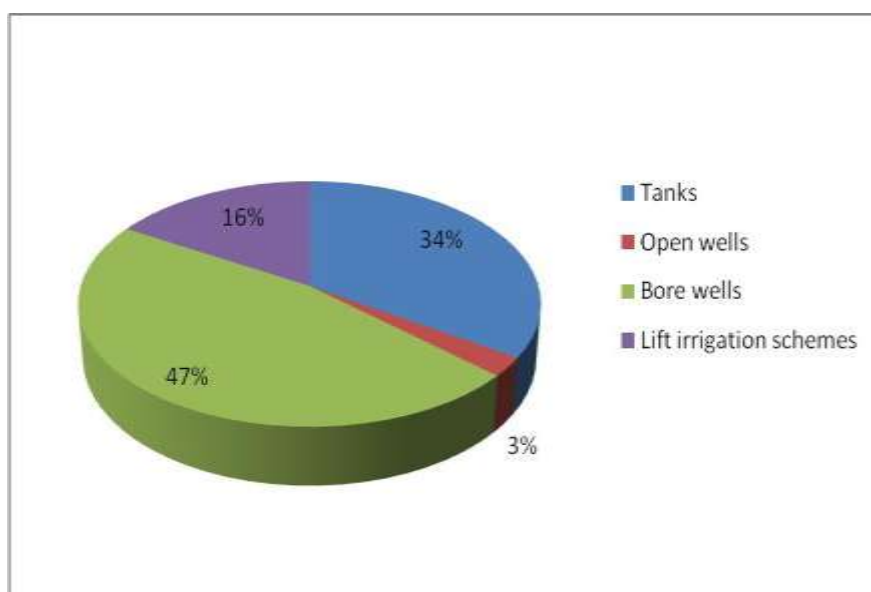


Fig: Sources of irrigation in South Tripura District

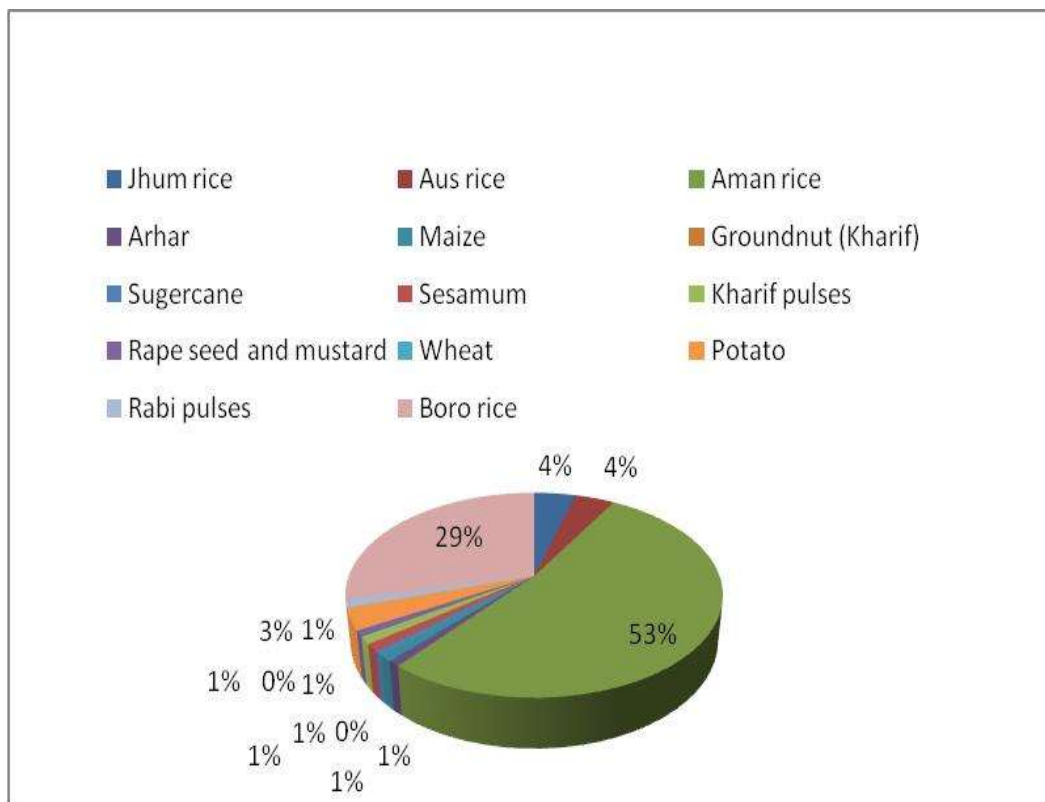


Fig: Geographical distribution of major crops in South Tripura District

Major soils of the district

Geographically the district is composed of sedimentary rocks. The maximum cultivated area of the district is having Red soil as compared to alluvial soil. With regard to soil texture, sandy loam soil having the maximum area followed by sandy soil and clay loam soil.

Table: Major soils of the district/details of soil series and crops grown in South Tripura District

Major Soils (common names like shallow red soils etc.)	Area in ha
1. Red Soil	77603
2. Alluvial Soil	3551.76
3. Sandy Soil	6845.90
4. Sandy Loam	47002.90
5. Clay Loam	47.40
Others (specify):	--

(Source: Dept. of Agriculture, Govt. of Tripura)

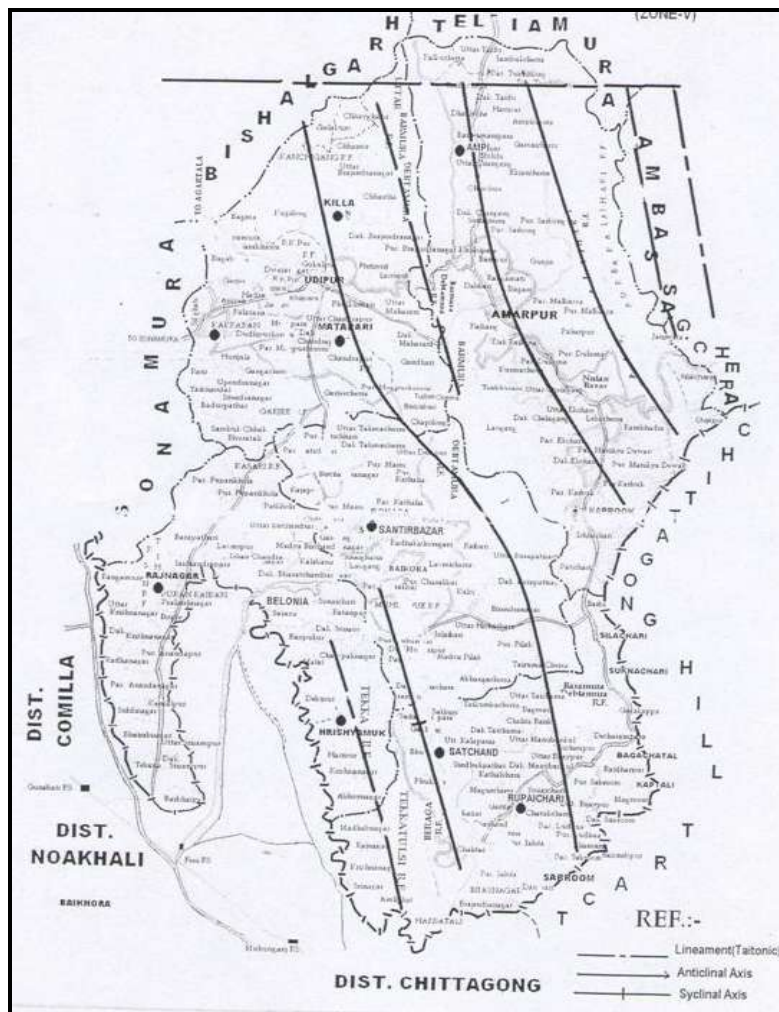


Fig: Location and operational area of KVK, South Tripura.

Existing Plant Protection Measures of South Tripura

The main crops in the South Tripura are: Cereals- rice, maize etc.; Pulses-black gram, green gram, arhar, pea and cowpea; Oilseeds- groundnut, mustard, sesamum etc. Vegetables- cole crops, tomato, brinjal, gourds, potato, squash and okra; Fruits- mango, banana, pineapple, citrus , litchi, guava, jack fruit and cashew nut. The district produces a sizable quantity of spices like pepper, ginger, turmeric, chillies and garlic. As the climatic conditions of the district are conducive for different types of agricultural and horticultural crops and these are also favourable for the occurrence and multiplication of insect pests and diseases and their natural enemies. Climate is the long term effect of the factors and determines what insect pests and diseases are present and how many generations are possible in a single active season, while weather is the short term or day to day effect and plays primary role in influencing insect pests and diseases abundance and damage. In South Tripura maximum temperature recorded is 35° C to 38° C and minimum is 7°C to 10° C which is congenial for growth and multiplication (Optimum temperature 21° C to 35° C) of insect pests and diseases. These insect pests and diseases cause colossal damage to crops resulting in to low production in the district south Tripura.

On the other hand, the relative humidity of south Tripura naturally varies from 60% to 90% which greatly influences the development of insect pests and diseases attack. Relative air humidity from 50% to 80% are probably the best range for most external plant pests. The plant also helps to maintain favourable humidity for most plant pests attacking them internally. Non judicious application of chemical fertilizers is one of the causes of insect pests and diseases attack in South Tripura.

Before taking any remedial measure an insect pest and disease causing damage to the crop should be known and identified. Due to improper identification of Insect pests and diseases usually accounts for failure of management operation. The identification of insect pest and disease concerned is, therefore, essential to secure appreciable reduction in insect pest and disease damage. To increase production and productivity there is a need to replace the existing chemical oriented plant protection techniques with economically viable and environmentally safe methods like Integrated Pest and Disease Management (IPM and IDM).

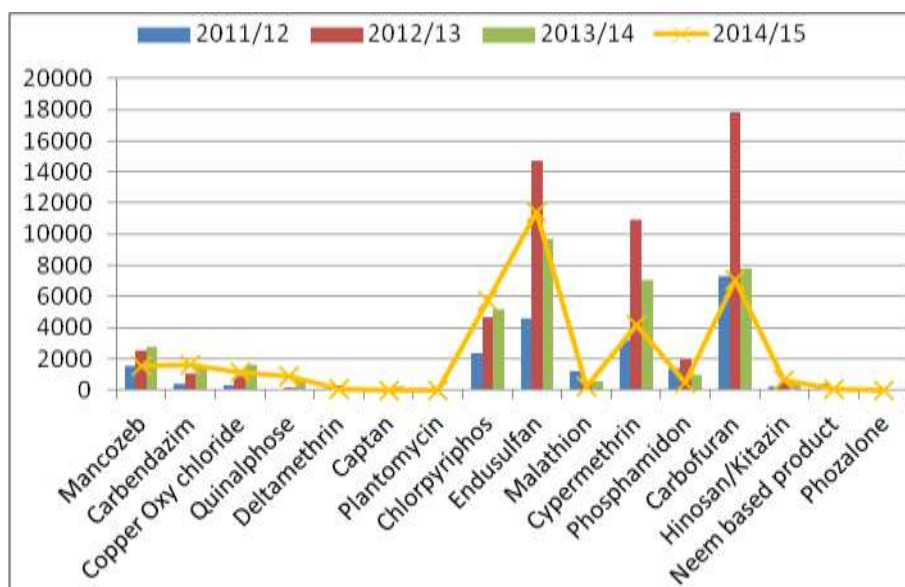


Fig: Information on use of Plant Protection Chemicals (Qty. in kg or Lt) in South Tripura District

LIVESTOCK

Livestock rearing is integral part of farming system of rural community of the South Tripura district. Majority of them rear livestock as a backyard production system for meeting the livelihood need and an additional source of income. Although the livestock availability ranges from cattle, goat, pig, and sheep to rabbit, the most popular and valued livestock in this district is pig especially in tribal villages.

Table: Livestock population of South Tripura District

Category		Population
Cattle	Exotic/Crossbred	18038
	Indigenous	276834
	Total cattle	294872
Buffalo		3688
Goats		201146
Sheeps		1511
Pig	Exotic/Crossbred pig	40551
	Indigenous pig	43504
	Total pig	84055
Poultry		823499
Ducks		293703
Turkey and other		24314

Source: - Animal Resource Development Department, Govt. of Tripura.

Table: Production and per capita availability of animal food in South Tripura district.

SI No.	Parameter	Unit	Qty. produced
1	Production of meat	Mt	4399.36
2	Production of milk	Mt	17833.99
3	Production of egg	Nos	40671288
4	Per capita availability of meat	Kg./year	6.38
5	Per capita availability of milk	Gm/day	78
6	Per capita availability of egg	Nos/year	43

Source: Sample survey report for the year 2013-14, ARDD, Govt of Tripura

FISHERIES

Among all the six blocks and two Nagar Panchayets (N.P.) of South Tripura, Bokafa have maximum culture fisheries resources, and shows highest fish production at block level as per culture fishery is concerned. Considering capture fisheries, bokafa block shows highest productivity of fish in capture fisheries.

Fish as a market item comes from two different sources: locally produced fish and imported fish from other states (West Bengal, Andhra Pradesh) and Bangladesh. Producer's share in consumer's rupee is comparatively less in case of imported fish. Transportation costs, preservation costs, share of wholesalers are the main reasons for that. Coming to the small local fish producers, it reaches to ultimate consumer directly through home consumption or marketing through rural markets. But fish from large fish producers of this district reaches to the consumers through middlemen (via. Distributor/ wholesaler i.e. *Aratder* and retailers) distribution of fish lots between *Aratder* and retailers carried out through auction of highest called price.

Table: Block wise water area, fish production and productivity under culture fisheries sector.

Sl. No.	Name of the Sub-div.	Name of the Block/ N.P.	Culture fisheries				Productivity (kg/ha/yr)
					Production		
			No.	Area (ha)	Fish Seed	Fish	
1.	Belonia	Nagar Panchayet	359	21.82		46.91	2180.0
		Rajnagar	5093	499.86	47.90	768.67	1673.0
		Hrishyamukh	4045	317.76	69.25	448.53	1466.0
	Total		9497	839.44	117.15	1264.11	1558.95
2.	Santirbazar	Bokafa	8077	902.53	63.71	1417.26	1570.32
	Total		8077	902.53	63.71	1417.26	1570.32
3.	Sabroom	Nagar panchayet	151	11.16		21.14	1894.53
		Satchand	4505	466.08	31.15	915.79	1964.87

		Rupaichari	2108	315.26	23.45	614.61	1949.53
	Total		6764	792.50	54.60	1551.54	1957.77

(Source: Dept. of Fisheries, Govt. of Tripura)

Table: Block wise water area, fish production and productivity under capture fisheries sector

Sl. No.	Name of the Sub-div.	Name of the Block/ N.P.	Capture Fisheries		Productivity (kg/ha/yr)
				Production	
			Area (ha)	Fish	
1.	Santirbazar	Bokafa	53.30	31.22	586.00
	Total		53.30	31.22	586.00
2.	Sabroom	Nagar panchayet	5.0	1.55	
		Satchand	80.00	11.42	
		Rupaichari	55.00	17.00	
	Total		140.00	29.97	214.07

According to the data provided by Department of Fisheries, South Tripura, Overall fish demand of the district is approximately fulfilled during the year 2007-08, although the state as a whole yet to achieve so. Among all the six blocks including Nagar Panchayets of south Tripura district, one blocks show surplus fish production and other five show shortfall in fish production.

Table: Block wise total water resources, fish production, fish demand and production status

Sl. No.	Name of the Sub-div.	Nam of the Block/ N.P.	Culture and Capture fisheries (TOTAL)		Total population	Fish Demand (MT)	Status (Shortfal I/ excess)
			Area	Fish (mt)			
1.	Belonia	N.P.	29.98	47.72	15700	196.30	(-)
		Rajnagar	651.86	830.17	96000	1185.60	(-)
		Hrishyamukh	375.76	461.83	72314	646.07	(-)
	Total		1057.60	1339.73	164014	2025.60	(-)
2.	Santirbazar	Bokafa	955.83	1448.48	134374	1659.50	(-)
	Total		955.83	1448.48	134374	1659.50	(-)
3.	Sabroom	N.P.	16.16	22.69	5715	70.58	(-)
		Satchand	546.08	927.21	83803	1034.69	(-)
		Rupaichari	370.26	631.61	45861	566.38	(+)
	Total		932.50	1581.51	135379	1671.654	(-)

Note: (+) surplus/excess, (-) shortfall.

CHAPTER III. CONSTRAINTS IN AGRICULTURAL PRODUCTION IN THE DISTRICT

CROPS

The natural factors of production including soil and water in the district are slowly degrading and retarding the growth of agricultural production. The soil health is deteriorating and irrigation water is not available in 72% of cultivated areas during non monsoon season. The poor availability of nutrients in the soil is having a direct bearing on crop growth and finally on the quality of the produce as grains, fruits, vegetables, fodder etc. The major reasons of gaps in yield of crops are poor and uncertain availability of water for irrigation, poor status of major and secondary nutrients, low N and P content in the soil and environmental stresses during the growth period of the crops

Different constraints of agricultural production in the district are:

- ✚ Large number of small and marginal holdings
- ✚ Erratic rainfall distribution
- ✚ No availability of canal water
- ✚ Coarse and light textured soils with poor retention of water and nutrients
- ✚ Poor fertility soils, low in available nitrogen (70%) and phosphorus (80%)
- ✚ Soil acidity problems
- ✚ Nonjudicious use of fertilizer
- ✚ Shift in weed flora
- ✚ Expansion of rubber plantation in the land suitable for agriculture and horticulture
- ✚ Monocropping sequence (Rice-rice-rice) is dominant.
- ✚ Poor management of cowdung and crop residue.
- ✚ Lack of water harvesting and management practices
- ✚ Rapid diversion of cultivated lands for non agricultural use
- ✚ Inadequate input supply through private sector
- ✚ Unavailability of labour during peak period of farm operations
- ✚ Inadequate farm machineries and lack of processing and storage facilities
- ✚ Key role of middle men in controlling the market price

- ✚ Lesser availability of quality seeds and planting material in time
- ✚ Rising cost of production and diminishing economic return
- ✚ Inadequate availability of quality fodder
- ✚ Farmers inability to invest
- ✚ High transportation cost
- ✚ Lack of proper knowledge of farmers of modern production techniques, post harvest handling and marketing prices
- ✚ Personal and social outlook
- ✚ Lack of orientation in developmental department
- ✚ Lack of farm finance and marketing awareness.
- ✚ Inadequate knowledge on application of plant protection measures among the farmers.
- ✚ Lack of irrigation (micro-irrigation/irrigation) facility.
- ✚ Lack of mechanization.

Table: Factors affecting productivity of major crops in South Tripura District

Sl. No.	Crop	Constraints
1.	Rice	Use of low yielding local varieties, attack of stem borer, leaf folder, BLB, brown plant hopper, imbalanced nutrition, improper management.
2.	Pulses	Use of non descriptive variety, imbalanced nutrition, improper management, unscientific management, lack of mechanization.
3.	Oilseed	Use of local varieties, unscientific management
4.	Papaya	Lack of adoption of improved variety, papaya mealy bug, unscientific management
5.	Pineapple	Staggering is not used in large scale, unscientific management
6.	Mango	Attack of mango mealy bug, unscientific management, lack of balanced nutrition, lack of irrigation (micro/drip) facility.
7.	Jackfruit	Lack of post harvest management, use of local varieties of jackfruit
8.	Coconut	Unscientific management, high incidence of rhinoceros

		beetle, lack of irrigation (micro/drip) facility.
9.	Cashew	Lack of availability of quality planting materials attack of stem borer, unproductive orchard
10.	Potato	Attack of late blight of potato, potato tuber moth, untimely sowing of potato due to late harvesting of potato, lack of mechanization.
11.	Vegetables	Lack of high yielding varieties of vegetables, unscientific management, imbalanced nutrition, insect pests and disease problem, lack of irrigation (micro-irrigation) facility in the rabi season.

LIVESTOCK

Production system	Constrains
Cattle production	Poor production potential of indigenous cattle, high susceptibility to disease in improved/crossbred cattle, lack of proper management and feeding practice, high cost of feed and medicine, improper housing etc.
Pig production	Poor growth performance of indigenous pigs, unscientific housing system, frequent occurrence of disease, high mortality rate due to inadequate health care measures, poor management practice etc.
Goat production	Poor performance due to low nutrient feeding system, parasitic infestation and bacterial and viral disease, unscientific housing pattern.
Poultry production	Poor performance potential of indigenous birds; high cost of feed, medicine and vaccines; high disease incidence rate especially in broilers and crossbred poultry, disease outbreak causes the panic in consumers and reveals cash loss of producers concern. Growth of poultry industry dependent on availability of feed and their competitive prices as feed cost is nearly 70% of total cost of production.
Rabbit production	Traditional system of rabbit rearing, high incidence of disease.

FISHERIES

✚ There is a huge gap in implementing the extension services such as farmer oriented activities as field level fishery assistant are at times not much technically sound.

✚ People are not aware of many fish varieties apart from famous ones. People don't put any extra input in the ponds apart from cow dung and at times they don't put even that

✚ Weak infrastructure for fish seed production and genetic upgradation

✚ Inadequate quality seed availability of high yielding freshwater prawn

✚ Poor maintenance of common or panchayat pond

✚ Medicines and fish seeds are not provided by government, which are necessary

✚ Fish are more prone to diseases in winter but no assistance is yet provided by the government.

CHAPTER-IV. INSTITUTIONAL SUPPORT FOR AGRICULTURAL DEVELOPMENT OF THE DISTRICT

CROPS

There are several institutions in the district devoted for the development of agriculture and related fields. State Govt. Departments, Govt. undertakings, national institutes and many voluntary organizations are very active and contribute substantially towards the overall agricultural development of the district.

1. Department of Agriculture

The State Dept. of agriculture has a network of establishment in the district to cater to the needs of the farming community. The department has following offices in the district:

a) Deputy Director Agriculture Office

This is the apex office to supervise and monitor agricultural development activities in the district. The office is located at Belonia, South Tripura. Deputy Director is the head of the office.

Address for communication:

Deputy Director Agriculture
Belonia, South Tripura
Phone no. 03823222111

b) Assistant Directors of Agriculture and Agriculture officers

In the six block of the District there are many Assistant Director to assist the Deputy Director and agriculture officers to assist the Assistant Director. Other than this, VLWs, Agri Inspector are there to assist the agriculture officers.

2. Krishi Vigyan Kendra (KVK), South Tripura

The Kendra started functioning since **1998**, under the administrative control of the Indian Council of agriculture Research (ICAR), South Tripura. The Kendra is situated at Birchandra manu, about 18 km away from the district headquarters, on the Agartala

Sabrom road. The operational area of KVK is the entire district and its location is depicted in Fig. 7.

a) Mandates

- i. To conduct On Farm Testing trials for identifying technologies in terms of location specific sustainable land use systems.
- ii. To organise Front Line Demonstrations on various crops to generate production data and feedback information in farmers' fields.
- iii. To organise trainings to update the extension personnel with emerging advances in agricultural research on regular basis.
- iv. To organise short and long term vocational training programmes in agriculture and allied fields for the farmers and rural youth with emphasis on learning by doing for higher farm production and generating self employment opportunities to the youth.









b) Programmes







i. Training programmes

The KVK is imparting regular training programmes in agriculture and allied fields for farmers, farm women and rural youth. There are two types of training programmes: scheduled training programmes for which training topics and dates are fixed by the Kendra. The second type of training programmes are organised to meet the specific demands from individual farmer, farmers 'groups, voluntary organizations, development departments, etc.





The thematic areas for training programmes are as follows:

Horticulture

-  Basics of plant propagation
-  Planning a nutrition garden in a homestead
-  Cultivation of under-exploited fruits
-  Propagation techniques in horticultural crops
-  Protected cultivation
-  Cultivation of summer vegetables
-  Vegetable cultivation
-  Pineapple cultivation

-  Seed production in vegetables
-  Establishment of commercial horticultural nursery for self employment
-  Propagation of fruit crops
-  Cultivation of banana
-  Organic vegetable production
-  Cultivation of promising medicinal plants

Agronomy

-  Integrated Nutrient Management
-  Weed Management
-  Resource Conservation Technology
-  Crop Diversification
-  Seed production
-  Soil Fertility Management
-  Water Management
-  Nutrient Management
-  Integrated Crop Management
-  Cultivation of tuber crops
-  Cultivation of pepper, ginger and turmeric

Plant protection







-  Management of pests and diseases of banana
-  Production and use of biocontrol agents and biopesticides
-  Integrated pest and disease management in horticultural crops
-  Management of bud rot and stem bleeding of coconut
-  Pest and disease management of vegetables
-  Preparation of botanical pesticides
-  Biological control of Phytophthora foot rot of black pepper
-  Management of mahali of arecanut
-  Integrated pest and disease management of spices
-  Mushroom production
-  Mushroom spawn production
-  Integrated disease and pest management in paddy
-  Bee keeping
-  Integrated pest and disease management in ornamental plants

-  Vermicomposting technique






Animal Husbandry

-  Dairy cow management and fodder cultivation
-  Goat management - a profitable enterprise
-  Rabbit management
-  Enrichment of fodder crops and silage making
-  Broiler chicken production
-  Backyard poultry rearing
-  Diseases of cattle and their control measures
-  Mastitis and its preventive measures
-  Pig farming
-  Feeding management in milch cows
-  Artificial insemination and pregnant animal management
-  Clean milk production and summer care of animals
-  Fodder preservation
-  Digestive problems and their preventive measures in cattle
-  Ecto and endo parasite control measures in livestock's
-  Indigenous medicines in animal treatment

Fisheries

-  Integrated fish farming
-  Breeding and culture of ornamental fishes
-  Fresh water fish and prawn culture
-  Cage and pen culture of fishes
-  Breeding and seed production of fishes
-  Fish processing technology

Home Science

-  Processing of fruits and vegetables
-  Rural crafts
-  Value addition in fruits and vegetables
-  Designing and development for high nutrient efficiency diet
-  Gender mainstreaming through SHGs

- ✚ Minimizing post harvest losses of fruits and vegetables
- ✚ Zero energy cool chambers
- ✚ Use of coconut climbing device and weed cutter

Agricultural Engineering

- ✚ Installation and maintenance of micro irrigation systems
- ✚ Use of plastics in farming practices
- ✚ Utilization of improve farm machinery and implements
- ✚ Care / Repair and maintenance of farm machinery and implements
- ✚ Repair and maintenance of plant protection equipments
- ✚ Layout and construction of Soil and water conservation measures
- ✚ Layout and construction of water harvesting structures
- ✚ Layout and construction of Pits for fruit orchard development
- ✚ Post harvest technology

ii. Front Line Demonstration

Organizing Front Line Demonstrations on newly released technologies in Horticulture, Field crops, Plant protection, Fisheries, Agricultural Engineering, Home Science and Animal sciences under farmers' field conditions to generate production data and feedback information is one of the mandates of the Kendra.

iii. On Farm Testing

On Farm Testing programmes aim at testing the new technologies developed at Agricultural Research centres in the Field crops, Plant protection, Horticulture, Vermicomposting, Mushroom, Apiculture, Animal Science, Agricultural Engineering, Home Science and Fisheries to ensure their suitability and sustainability to specific locations and to suggest or modify or refine the technology in real farm situations with the active participation of the farmers.

v. Farm Advisory Services

The Kendra organizes field visits as per the requirements of farmers to solve specific field problems. The Kendra also encourages the farmers in remote and distant locations to use communication media to contact the centre to solve their immediate field problems.

vi. Farmers Study Tours

The Kendra organizes study tours for farmers to various research centres and fields of progressive farmers for 'seeing and studying'.

vii. Farmer's visit to the Kendra

Farmers are encouraged to visit the Kendra in person to discuss and solve their specific field problems and to get hands-on knowledge on the latest technologies available in agriculture and allied fields.

viii. Exhibitions, Kisan Melas, Camps, etc.

The KVK regularly participates in exhibitions organized by local and statutory bodies, depicting its various activities and providing on the spot consultancies to the visitors. The Kendra's stalls have bagged many awards. Farmers and others visit the pavilions of the KVK and avail the facilities offered there, including supply of elite planting materials.

ix. Production and supply of planting materials, breeds of animals and other technological inputs

The Kendra produces and sells planting materials of spices, fruits, plantation crops including arecanut and coconut and ornamentals. Improved breeds of poultry, cows, goats, etc. are also sold to the farmers. Other technological inputs like bio-control agents and bio-products are also available to farmers.

x. Other extension activities

The Kendra also organizes the following programmes:

- a) Field days
- b) Farmers day
- c) Film shows
- d) Seminars

- e) Quiz programmes for students
- f) World food day
- g) Seed/seedling distribution day
- h) Publication of popular articles
- i) Veterinary activities
- j) Radio talks
- k) TV talk
- l) Ex-trainees meet
- m) Method demonstration
- n) Exposure visit
- o) Group Discussion
- p) Krishan Gosthi
- q) Soil Health Camp
- r) Animal Health Camp
- s) Farmers Scientist Interaction
- t) Lecture Delivered as Resource Person
- u) Awareness camp
- v) Documentation of Indigenous Technical Knowledge (ITK)

Address for communication

Programme Coordinator
 Krishi Vigyan Kendra
 Manpathar P.O., South Tripura-799144
 Tripura.
 Phone: 03823252370
 Fax: 03823252523
 E-mail: kvksouthtripura@gmail.com
 Website: www.kvksouthtripura.org.in

3. Agricultural Technology Management Agency (ATMA)





Agricultural Technology Management Agency (ATMA) is a registered society of key stakeholders involved in agricultural activities for sustainable agricultural development in the district. It aims at integrating research and extension activities and decentralizing day-to-day management of the public Agricultural Technology System (ATS). At state-






level, it operates under the guidance of a Governing Board that determines programme priorities and assesses impact of programmes. The ATMA is constituted by drawing members from all research and extension units within the district such as Zonal Research Stations or sub-stations, Krishi Vigyan Kendras and the key line Departments of Agriculture, Animal Husbandry, Fisheries, Sericulture, Agro industries, etc. The State Agriculture Management Extension and Training Institute (SAMETI) is the agency formed at the state level to provide human resources development support for the effective functioning of the ATMA at district level. The South Tripura District ATMA office is located in the office of Deputy Director of Agriculture and the District Collector & Magistrate is the chairman.

a) Objectives

-  To identify location specific needs of farming community for farming system based agricultural development.
-  To set up priorities for sustainable agricultural development with a farming systems approach.
-  To draw plans for production based system activities to be undertaken by farmers/ultimate users.
-  To execute plans through line departments, training institutions, NGOs, farmers organizations and allied institutions.
-  To coordinate efforts being made by various line departments, NGOs, farmer's organizations and allied institutions to strengthen research extension-farmers linkages in the district and to promote collaboration and coordination between various State funded technical departments.
-  To facilitate the empowerment of farmers/producers through assistance for mobilization, organization into associations, cooperatives etc. for their increased participation in planning, marketing, technology dissemination and agro-processing etc.
-  To facilitate market interventions for value addition to farm produce.

b) Functions

-  Strategic planning
-  Networking and co-ordination
-  Integrated extension delivery
-  Information management

-  Farmer facilitation and empowerment
-  Training and capacity building
-  Fund management
-  Participatory technology development
-  Monitoring and evaluation

4. Lead Bank:

The Lead Bank Scheme provides leadership in initiating, streamlining and accelerating the process of development of the respective district by enlisting the co-operation of other banks and by maintaining continuous liaison with Government and quasi Government agencies. The United Bank of India functions as the lead bank in the district.

Address for communication

United bank of India
Udaipur Branch, Gomati Tripura,
Tripura-799120,
Ph no. 03821-222282

5. Other banking institutions

All nationalized banks and other financial sectors such as Tripura Gramin Bank, State Bank of India, Union Bank of India, Allahabad Bank, HDFC Bank, Axis Bank, ICICI Bank etc. in the district have special schemes for the promotion of agriculture and allied fields in the district.

6. Farmers clubs and voluntary organizations:

There are several voluntary organizations and farmers groups very active in the district with the aim of overall development of the farming community.

LIVESTOCK

1. Animal Resources Development Department, Govt. of Tripura

Animal Resources Development Department in the state vested with -

- ✚ Extensive veterinary health coverage through prevention and control measure.
- ✚ To create self sufficiency in animal origin food i.e. milk, meat & egg.
- ✚ Creation of avenues for self employment generation for unemployed youths.
- ✚ To bring additional income of farmers through various animal husbandry activities.

At present, the district has 2 Veterinary Hospital, 10 Veterinary Dispensary, 1 Artificial Insemination Centre, 61 Veterinary Sub-Centre, 3 Pig Breeding Farm, 1 Goat Breeding Farm, 1 Fodder Farm.

In addition to this the department through the Intensive Cattle Development Programme had been providing artificial insemination services to the farmers. Of late, the dept. under the National project for Cattle and Buffalo Breeding (NPCBB) programme have taken steps for providing AI services at the door step of farmers. The district has now 49 no. of Artificial Insemination Centre (AIC), 2 nos. DSAIW and 10 No. of Door step A.I. workers trained to provide immediate AI service to the door steps of the farmer.

Address for communication

Deputy Director

ARDD, Belonia, South Tripura

Contact No :-(03823) 222374

2. Co-operative Societies:

In Tripura, 2-tier cooperative movement is followed i.e. apex or State level and primary level. The dominant sector of cooperative movement in the State comprises agri credit, consumer, marketing etc, and these can be broadly categorized according to their activities as agri credit and non-agri-non-credit societies. Apart from agriculture credit and non agriculture credit societies fishery, animal husbandry, village and cottage industry cooperatives are also playing a significant role in the rural economy of the state. In this state there are 1748 numbers of Co-operative societies functioning.

In South Tripura district there are around 135 Co-operative societies functioning in the state out of which five are piggery Co-operative, one is poultry Co-operative and two are milk supply Co-operative.



Gomati Co-operative Milk Producers' Union Ltd.

Gomati Cooperative Milk Producers' Union Ltd. was established in the year 1982 for the successful implementation of the Operation Flood -II a dairy programme launched in 1970 under the aegis of National Dairy Development Board (NDDB). It is situated at Indranagar, Agartala. Milk Union started its village level dairy cooperative extension work in the year 1982 in the operational areas of West Tripura District and a portion of South Tripura District. Agartala dairy comes under this milk union. Capacity of Agartala Dairy (installed in 1980-81) was expanded from 10,000 litres per day to 15,000 litres per day in the year 1997- 98 under IDDP-I and work of further expansion to 19,000 litres per day is completed in the year 2010 under IDDP-III. Expansion in the capacity of dairy plant has become essential to meet up the increasing demand of processed milk.

Objectives



Remunerative and timely payment to the milk producers.



Yearly special price incentive on supplied milk.



Supply of balanced cattle feed at supported price.



Balanced calf growth Ration comparatively at a lesser price to producers.



Managerial assistance to societies.



A.I. facilities to producers.



Veterinary medicines, first aid etc.



Technical inputs and extension services.



Fodder seeds, fertilizer etc.



Conduct various training programme for the farmers, society secretaries, executive



Committee members of the society.



Revolving fund to societies to meet up the immediate expenditure on milk business.



Management grant to societies to protect the interest of the producers.



Organize cattle show and milk yield competition etc.



Farmers induction programme.

Milk Union is successfully catering the demand of liquid processed milk in the city of Agartala and its suburb, Udaipur, Teliamura and Khowai through a network of whole day milk parlour, retail outlets and a network of 250 authorised retailers. 365 days requirement of milk of the different hospitals, sports schools, army, para-military is also

being catered by the efficient management of this Milk Union. By this time near about 4 lakhs consumers have associated with us and consuming processed Gomati milk and milk products.

Address for communication

Gomati Co-operative Milk Producers Union Ltd.

Indranagar, Agatala.

Contact No :-(0381)2353324.

3. NGO and Voluntary organization:

In Tripura Non Government Organization/ Voluntary Organization are part of social development and welfare of the state people. NGOs in Tripura have been actively working for genuine social development and welfare activity of urban and rural community. Few NGOs/VO are working for employment generation, increase family income and enhancing livelihood through upliftment in animal husbandry practices among rural peoples.

Name of some NGOs working in South Tripura district are Sanjivani welfare society, Bahujana Hitaya education trust, Chubalaima basong etc. which are mainly organization for rural survival.

Table: Major Offices for Livestock Development in South Tripura District

Officers	Address	Phone numbers
Deputy Director, ARDD	Belonia, South Tripura	(03823) 222374
Assistant Director, ARDD	Belonia, South Tripura	(03823) 222244
Assistant Director, ARDD	Bokafa, B.C. Manu, South Tripura	(03823) 272813
Assistant Director, ARDD	Sabroom, South Tripura	(03823) 270935

FISHERIES

The various institutional infrastructures available for support of fisheries sector in the district are as follows

Sl. No.	Particulars	Nos.
1	Fishery farms under Govt.	
	Fish breeding farm	3
	Fish seed centre	5
2	Hatcheries (Govt. + Private)	
	Carp hatchery	4
	Prawn hatchery	2
	Catfish hatchery	2
3	Number of fish seed growers	411
4	Ornamental fish breeding centre	-
5	Fish feed manufacturing plants	2
6	Fish feed analysis laboratory	1
7	Soil and water testing laboratory	5
8	Fish health investigation centre	-
9	Fish Farmers Development Agency (FFDA)	1
10	Fishermen cooperative Societies	44
11	Fishery based SHG	434
12	Model village developed	8
13	Training Institute or Centre	
	Tripura Fisheries Training Institute	1
	Fish Farmers Training Centre	-
	Fisheries Awareness Centre	1
14	Krishi Vigyan Kendra	1

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

A number of organizations with their headquarters/offices located in and outside the district and institutions with all India mandates carry out research and developmental activities in crops relevant to the district. The technologies and schemes can be adopted/availed by the farming community of the district. Moreover the farming community is free to access to any technology developed by institutes under the Indian Council of Agricultural research and state agricultural department.

CROPS

1. National Bank for Agriculture and Rural Development (NABARD), Agartala

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) clubs, organizing the farmers.

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.

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.

Agricultural technologies supported by NABARD

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

Allied Activities:

1. Frozen semen bank/ laboratory
2. Calf rearing
3. Poultry feed
4. Crab culture/ fattening
5. Paddy fish culture
6. Fresh water prawn culture

Post Harvest/Agro-processing:

1. Aseptic packing and processing

The bank operates in the district through its Assistant General Manager's Office located in Udaipur, Gomati District.

Address for communication

NABARD

Assistant General Manager

Udaipur, Gomati District

2. State Horticulture Mission, Agartala

The State Horticulture Mission is a registered society to implement the National Horticulture Mission programme, a centrally sponsored scheme, introduced during the financial year 2005-06. This scheme envisages an end to end development of the horticulture sector covering production, post harvest management, processing and marketing.

Objectives

1. To provide holistic growth of the horticulture sector through an area based regionally differentiated strategies which include research, technology promotion, extension, post harvest management, processing and marketing.
2. To enhance horticulture production, improve nutritional security and income support to farm households.
3. To establish convergence and synergy among multiple on-going and planned programmes for horticulture development.
4. To promote, develop and disseminate technologies, through a seamless blend of traditional wisdom and modern scientific knowledge.
5. To create opportunities for employment generation for skilled and unskilled persons, especially unemployed youth.








Address for communication

Mission Director
State Horticulture Mission - Tripura
Paradise Chomohani, Agartala.

3. Rubber Board, Agartala

The Rubber Board is a statutory body constituted by the Government of India, under the Rubber Act 1947, for the overall development of the rubber industry in the country. The Rubber Board carries out various development activities designed to promote expansion and modernisation of the rubber plantation industry. The board is responsible for carrying out research on various aspects of rubber production and product development. The board coordinates its activities in the district through the office of the Deputy Rubber Production Commissioner, located at Udaipur city.

Functions

-  Production and distribution of improved planting materials.
-  Provide advisory and extension services to growers.
-  Demonstration of scientific planting and production.
-  Supplies of equipment and materials requiring popularization.
-  Encourage block planting, group planting etc. for promotion of rubber among scheduled caste/scheduled tribe members.
-  Promotion of activities of voluntary associations (Rubber Societies) and self help groups among small growers.
-  Training of tappers.

Address for communication

Chairman, Rubber Board

P.B. No. 1122

Kottayam-686 002, Kerala

Phone: 0481-2301231

Fax: 0481-2571380

Deputy Rubber Production Commissioner

Rubber Board Regional Office

Agartala







Website: www.rubberboard.org.in

4. ICAR Research Complex For NEH Region, Tripura Centre, Lembucherra

Indian Council of Agricultural Research (ICAR) is an autonomous organization, its headquarter is situated in New Delhi.

Mandate of the Institute






Development of sustainable farming systems for different agro-climatic and socio-economic zones of the region.

-  Improvement in the productivity of different crops, live stocks and aquatic fauna through the development / screening of varieties and agro-techniques.
-  Improvement in rain-fed agriculture through watershed based approach
-  Development of local competence through training on agriculture and allied sectors.
-  Development of effective linkages with other development departments, financing agencies and SAUs / CAUs operating in the region.
-  To maintain database and act as a repository of information centre on agriculture and allied sectors and to provide consultancy in the above areas including plant and animal bio-technology.
-  Germplasm exchange, research update in a collaborative mode with other national and international agencies.

Research Agenda

Farming systems research and agro-forestry interventions through water shed based approach

-  Development and screening of suitable crop varieties
-  Development of efficient cropping systems
-  Soil and nutrient management
-  Development of technologies for organic food production
-  Diseases and pest management
-  Improvement of fruits, vegetables and spices including floriculture and hi-tech horticulture
-  Soil and water conservation
-  Farm mechanization
-  Post harvest technology
-  Rodent management
-  Improvement of important livestock and poultry

-  Development of animal health covers measures
-  Development of aquaculture in hills
-  Molecular genetic studies in IPR perspective
-  Testing and refinement of evolved technologies at farmers' field and their dissemination
-  Use of Information Technology in Agriculture and also market intelligence

Address for communication





Joint Director,
ICAR Research Complex For NEH Region,
Lembucherra, West Tripura,
Pin 799210
Email:mdatta54@gmail.com
www.tripuraicar.gov.in

LIVESTOCK

1. College of Veterinary Sciences & Animal Husbandry, Agartala, Tripura (w)

The college has been established in 2009 and provisionally affiliated to Tripura University (Central University). The College has started functioning temporarily at R.K.Nagar Farm Complex utilizing the available building of Department.

The mandates of the college are

-  To impart education in different branches of Veterinary Science & Animal Husbandry.
-  To further the advancement of learning and prosecution of research on Veterinary Sciences & Animal Husbandry.
-  To undertake programmes of extension education in state under jurisdiction and
-  To undertake such other activities as it may deem fit from time to time.

Address for communication

College of Veterinary Sciences & Animal Husbandry,

R. K. Nagar, Agartala, West Tripura, Pin: 799008.

Principal :-(0381) 2391005.

Academic cell:- (0381)2391004.

a) Teaching Veterinary Clinical Service Complex (TVCC)

The Teaching Veterinary Clinical Service Complex (TVCC) department is a clinical teaching, training and service centre and deals with the clinical aspects of medicine, surgery and radiology and gynaecology and obstetrics, to the students. The department offers clinical-oriented 18 credit hours courses spread in two academic years (three semesters) to the B.V.Sc. & A.H. students during the fourth and fifth year of the degree programme. TVCC is manned by the faculties from the departments of Medicine, Surgery & Radiology and Gynaecology & Obstetrics.

b) Instructional Livestock Farm:

The College has a well-developed Instructional Livestock Complex (ILFC) where species of domestic animals and birds are maintained for imparting training to the undergraduate and postgraduate students. The ILFC is attached to the Department of Livestock Production & Management. The ILFC offers two credit hours (compulsory non-credit) spread in two semesters during the second year of the undergraduate programme.

The ILFC is monitored by the Livestock Farm Advisory Committee under collective responsibility of the departments of Livestock Production & Management, Animal Nutrition and Animal Genetics & Breeding.

2. Government Livestock/ Fodder Farm (ARDD, Govt. of Tripura)

Livestock farms have been established in South Tripura district for rearing high yielding varieties of pig and goat. There are three pig breeding farms and one Goat breeding farm and one fodder development farm in South Tripura district under state government.

a) Pig Breeding Farm, B.C. Manu.

b) Birchandra Manu, Pig Breeding Farm (under TTAADC)

- c) Pig Breeding Farm, Jalefa, Sabroom.
- d) Goat development farm (CLF), B.C. Manu.
- e) Fodder farm, B.C. Manu

a) Pig Breeding Farm, B.C. Manu.

There is a great potential for the growth of Pig husbandry in Tripura. The main objective of the Government is to enhance pig production of the state by upgrading the local variety of pigs through cross breeding with the exotic pigs.

Objective:

To improve the local variety of pigs by Cross breeding with exotic breeds and also proliferation of exotic variety to augment pork production of the state. Present stock position of Pig Breeding Farm, B.C. Manu is 424 (2013-14).

Address for communication

Composite Live Stock Farm, B.C. Manu
South Tripura-799144
Contact No. 03823 252393

b) Birchandra Manu, Pig Breeding Farm under Tripura Tribal Autonomous Area District Council (TTAADC):

Pig breeding farm, Birchandra Manu (TTAADC) is also maintaining exotic breed of pigs for supply of superior quality piglets and upgrading the local variety of pigs through cross breeding.

Address for communication

Assistant Director, ARDD (TTAADC)
B.C. Manu, South Tripura-799144
Contact No: (03823) 272813

c) Pig Breeding Farm, Jalefa, Sabroom.

Pig breeding farm, Jalefa is also maintaining exotic breed of pigs for supply of superior quality piglets and upgrading the local variety of pigs through cross breeding.

d) Goat development farm (CLF), B.C. Manu.

The Composite Live Stock Farm, B.C. Manu has been engaged in preserving the genetic pool of Black Bengal variety of Goats, which is considered as the best quality goat meat in the country. However, with a view to evaluate the adaptability, some other varieties of goats are being reared in this farm.

Address for communication

Composite Live Stock Farm, B.C. Manu

South Tripura-799144

Contact No : (03823)252393

3. Disease Investigation Laboratory (ARDD, Govt. of Tripura)


In Tripura there are 4 numbers of Animal Disease Investigation Laboratory respectively in North, Dhalai, West and Gomati district. D.I. Laboratory of Gomati district provides disease investigation facility to South Tripura District also.


FISHERIES

1. National Fisheries Development Board (NFDB)

NFDB under ministry of agriculture, government of India provides assistance for intensive aquaculture in ponds and tanks, fisheries development in reservoirs, coastal aquaculture, mariculture seaweed cultivation, infrastructure development for fish harbours and landing centres, fish dressing centres and solar drying of fish, strengthening of domestic markets and promotion of deep sea fishing.

The objectives of NFDB are as follows:

 To bring activities relating to fisheries and aquaculture for focused attention and professional management.

 To coordinate activities pertaining to fisheries undertaken by different Ministries/Departments in the Central Government and also coordinate with the State/Union Territory Governments.

- ✚ To improve production, processing, storage, transport and marketing of the products of capture and culture fisheries.
- ✚ To achieve sustainable management and conservation of natural aquatic resources including the fish stocks.
- ✚ To Apply modern tools of research and development including biotechnology for optimizing production and productivity from fisheries.
- ✚ To provide modern infrastructure mechanisms for fisheries and ensure their effective management and optimum utilization.
- ✚ To generate substantial employment.
- ✚ To enhance contribute of fish towards food and nutritional security.

Address for Communication:





National Fisheries Development Board Maitri Bhavan
Huda Commercial Complex, Ameerpet
Hyderabad-500 038, Andhra Pradesh
Phone: 040-23737256/23731128
Fax: 040-23737208
E-mail: info.nfdb@nic.in
Website: www.nfdb.ap.nic.in

1. Collage of Fisheries (CAU), Lembucherra, Tripura

Tripura has rich traditions in fisheries as compared to all the states under the jurisdiction of CAU and possess greater potentialities for fisheries related activities. Hence, the Central Agricultural University decided to locate the college of fisheries in the State. Through the Ordinance No 2 of 1996 promulgated by the ministry of Agriculture, Department of Agricultural Research and Education (DARE), Government of India, the College of Fisheries started functioning from 3rd October 1998 and become the 12th Fisheries College of the Country established under the Agricultural University Education System. The College was shifted to its own campus at Lembucherra in September 2001. The campus has a total area of 61.36 acres provided by the State Government. The place is well connected with the capital city Agartala and located at about 12 km north of the capital city.

Other than academic programme, this college is also actively involved in research and development in fisheries sector of the state as well as for south Tripura district.




Mandate

-  To impart education in different branches of fisheries and allied sciences;
-  To further the advancement of learning and prosecution of research in fisheries and allied sciences;
-  To undertake programs of extension education in states under the jurisdiction, and
-  To undertake such others activities as it may deem fit, from time to time, to uplift the socio-economical status of farmers in the N.E. Region.

Mission

To achieve excellence in teaching, research and extension education in the field of fisheries and allied sciences.

Goals

-  To produce globally competitive graduates and post graduates in fisheries and allied sciences
-  To develop sustainable and profitable fish farming systems to improve the livelihood of people
-  To transfer fisheries and allied activities into profitable enterprises and thereby create food and nutritional security for the people of NE region.

Address for communication

Dean
College of Fisheries, Central Agricultural University
Lembucherra, Tripura (West)
PIN: 799 210
Tele/ Fax: 03812865291
Email: cofcau@rediffmail.com

CHAPTER-VI PLANS AND SCHEMES FOR PROMOTION OF AGRICULTURE

Several organizations are responsible for promotion of agriculture and allied fields through development and implementations of specific plans and schemes. The major plans and schemes of various institutions are briefly described below.

CROPS

1. National Bank for Agriculture and Rural Development (NABARD) Plans

i. Village Adoption/Village Development Plan

The plan aims at the holistic and integrated development of backward villages. Emphasis is given on developing infrastructure facilities in agriculture, education, health, drinking water, power, roads, credit, information and market.

ii. Pilot Project for Integrated Development of Backward Blocks (PPID)

The objective of the PPID is comprehensive development of the selected backward blocks in an integrated manner which would include economic development, infrastructure development and other aspects of human development i.e., education, health, drinking water supply, etc. through the collective involvement of all agencies working at grass root level viz. Local panchayats, banks, NGOs, people's organisations and other development agencies. The schemes and activities included are:

1. Watershed development.
2. Non-Farm Sector programmes.
3. Micro finance.
4. Farmers' groups under Self Help Groups.
5. Infrastructure development under Rural Infrastructure Development Fund.
6. Capacity building of banks, government departments, NGOs and community based organizations.
7. Coordination with Government Departments for social development, i.e. education, health, women and child development, etc.

8. Implementation of development programmes of the State Government, contribute to the project.

iii. Promotion of Medicinal and Aromatic Crops (MACs)

Promotion of cultivation of medicinal, aromatic and herbal crops has been accorded special status by NABARD in accordance with the policy of Government of India. NABARD has initiated measures to promote the cultivation of medicinal and aromatic crops (MACs).

iv. Micro Credit Innovations -Kisan Credit Card

NABARD formulated a Model Kisan Credit Card Scheme in consultation with major banks. As a pioneering credit delivery innovation, Kisan Credit Card Scheme aims at provision of adequate and timely support from the banking system to the farmers for their cultivation needs including purchase of inputs in a flexible and cost effective manner. Beneficiaries covered under the scheme are issued with a credit card and a pass book or a credit card cum pass book incorporating the name, address, particulars of land holding, borrowing limit, validity period, a passport size photograph of holder etc., which may serve both as an identity card and facilitate recording of transactions on an ongoing basis Scheme aims at provision of adequate and timely support from the banking system to the farmers for their cultivation needs including purchase of inputs in a flexible and cost effective manner. Beneficiaries covered under the scheme are issued with a credit card and a pass book or a credit card cum pass book incorporating the name, address, particulars of land holding, borrowing limit, validity period, a passport size photograph of holder etc., which may serve both as an identity card and facilitate recording of transactions on an ongoing basis.

v. Swarojgar Credit Card (SCC) Scheme

Swarojgar Credit Card Scheme (SCC Scheme) was introduced in September 2003. The scheme aims at providing adequate and timely credit whether working capital or block capital or both to small artisans, handloom weavers, self employed persons etc. from the banking system in a flexible, hassle free and cost effective manner. Any income / employment generating scheme/project may be covered under the scheme. The facility may also include a reasonable component for consumption needs.

vi. Farmers' Club Programme

NABARD promotes the formation of farmers' clubs enabling them adoption of newer farm technologies and empowering them for collective bargaining both for procuring inputs and selling their produce. The clubs are orienting them to establish better relationship with banks for suitable financial support in time of need.

vii. United Swarna Krishi Yojana

Objective

To provide quick and hassle free liquidity to individuals for taking up supplementing productive activities under Agriculture.

Purpose: 1) Growing seasonal crops
 2) Any other agricultural operations and activities allied to agriculture.

Eligibility :

Farmers including Small and Marginal farmers, Agriculture labours, Bargadars, Share croppers, Patta holders, Individually / Jointly with family members excluding goldsmith, jewel-appraiser and their close associates, Persons engaged professionally in gold/jewel manufacturing/trading are excluded from such financing. A Savings Bank account is to be opened by the borrower observing KYC norms.

Age: Maximum upto 60 yrs. of age.

Area of operation: All potential branches to be selected by Regional Heads.

Quantum of loan: Purpose wise and need based.

 Minimum amount of loan: Rs. 1000/-

 Maximum amount of loan: Rs. 5,00,000/- per borrower.

However, amount of loan must be within the maximum permissible amount of loan per gram of gold (22 carat) kept as security.

Sanctioning authority

Sanction to be accorded by the Manager within his/her discretionary power.

Margin: Minimum 25% of the prevailing market value of gold (22 Carat) available from different sources like Daily Newspaper/TV coverage etc. but not exceeding Rs. 1900/- per gram of gold (22 carat).

Security:

- i) Pledge of gold ornaments (22 carat only)
- ii) Ornaments with jewellery fittings, infillings and gold coated ornaments is also acceptable as security but net weight as certified by the assessor is to be considered for determination of the quantum of loan.
- iii) Ornaments which are stridhan are acceptable only when the female owner joins as co-borrower.
- iv) Ornaments inscribed with names other than the borrower are not to be accepted

Interest: As per extant guidelines of interest on agriculture loans and subject to change from time to time.

For Crop Loan Interest Subvention scheme will be applicable. The rate of interest is 6.7% p.a. for loan upto Rs. 3 lac per borrower for 2010-11 F.Y. The quantum of crop loan should be decided based on Scale of Finance and Area of cultivation but shall not exceed the permissible amount of loan up to Rs. 1200/- per gram of gold.

Service Charge: 0.25% of the value of loan amount sanctioned with a minimum chargeable amount of Rs. 25/- per borrower.

Disbursement: The loan amount will be credited to S.B. account of the Borrower.

Type of loan: For cultivation of seasonal crops “ODUSK” and for other Term purposes “LAGLS” scheme code under CBS system are to be used.

Repayment: For Kharif and Rabi crop due date of repayment will be 31st March and 30th June respectively. For other agriculture and allied activities repayment will be on monthly /quarterly/half-yearly/yearly based on cash flow. Maximum repayment period will be limited to 5 years.

2. Rubber Board Schemes in operation

There is a well structured field establishment set up under the Rubber Production Department which renders free advisory and extension services to rubber growers on all aspects of rubber cultivation, production, processing and Marketing and simultaneously attends to implementation of various development schemes as well. Field Offices located at all important rubber growing centres play important roles in extension activities.

1. Rubber Plantation Development Scheme Phase IV
2. Rubber Plantation Development Scheme - Phase V
3. Rubber Plantation Development Scheme - Phase VI

- 4 Rubber Plantation Development Scheme in North East
5. Schemes for Assisting Planting and Upkeep
6. Scheme for popularising use of Low Volume Sprayers
7. Scheme for Improving Tapping
8. Schemes for Assisting Rubber Growers' Cooperatives
9. Scheme for Promoting Rubber Producers Societies (RPSs)
10. Schemes for Assisting Companies in the RPS Sector
11. Schemes for Assisting Large Growers
12. Schemes of General Nature

Address for communication

Director, Rubber Research Institute of India

Rubber Board

Kottayam-686 009

Phone: 0481-2353311-20

Fax: 0481-2353327, 2353324

E-mail: rrii@rubberboard.org.in

Website: www. rubberboard.org.in

3. Department of Agriculture



Ongoing Scheme under Department of Agriculture in South Tripura District

Following schemes are going on under macro management mode:

- a) Integrated cereal development programmers rice(ICDP-Rice)
- b) Special Jute Development Programme
- c) Sustainable development of Sugarcane based cropping system areas
- d) Balanced and Integrated use of Fertilizer
- e) Production of Foundation of Certified seeds in Govt. Farms of Tripura
- f) Promotion of agricultural machineries among small farmers
- g) Integrated scheme for improvement of Jhum crop
- h) Oilseed production system
- i) National pulse development programme
- j) Accelerated Maize development programme (A.M.D.P)
- k) Popularization of Use of Biofertiliser in Tripura

- l) Rural market development programme
- m) Popularization of hybrid rice in Tripura
- n) Registered Grower Programme for rice and pulses.

Scheme of North Eastern Council

- a) Strengthening of Seed Production and Quality Control
- b) Establishment of cold storage (500 MT capacity)

Additional Central Assistance

Scheme for Establishment of an agency for reporting agricultural statistics

Central sponsored scheme

- a) Intensive cotton development programme
- b) Scheme for Establishment of an agency for reporting agricultural statistics
- c) Integrated Watershed Management programme (IWMP)
- d) National Food Security Mission(NFSM)
- e) Rashtriya Krishi Vima Yojana
- f) Agricultural Technology Mission Agency (ATMA)

State Plan Scheme

- a) Project for Infrastructure Development and Farm Mechanization
- b) Integrated Seed Development in Tripura
- c) Popularization of manures and Fertilizers
- d) Project for Plant protection service
- e) Project for Extension and Farmers Training
- f) Scheme for Development of Cold Storage
- g) Scheme for Development of Market and Marketing Facilities in Tripura

Rashtriya Krishi Vikas Yojana in South Tripura District

Rashtriya Krishi Vikas Yojana, widely known as RKVY or the National Agriculture Development Programme (NADP) is a new Special Additional Central Assistant scheme introduced by the Centre to the States. This is being administered by the Union Ministry of Agriculture Government of India over and above its existing centrally sponsored schemes to promote state-specific agricultural strategies. This scheme addresses mainly the current issues confronting the agricultural sector such as (a) input related issues of water resources management, quality seeds, fisheries and

pesticides (b) post harvest issues of market adequate post harvest management, agricultural technologies (c) institutional issues related to agricultural research, more relevant to needy regions, access to credit, reform in cooperative system in the light of Vaidyanathan Committee's recommendations, agricultural insurance and extension services (d) specific c issues like stagnation in rain-fed agriculture and larger issue of low investment in agriculture vis-à-vis increasing subsidies. The RKVY aims at achieving 4.5% annual growth in the agriculture sector during the XI Plan period, by ensuring a holistic development of Agriculture and allied sectors. The main objectives of the scheme are:

1. To incentivize the states so as to increase public investment in Agriculture and allied sectors.
2. To provide flexibility and autonomy to states in the process of planning and executing Agriculture and allied sector schemes.
3. To ensure the preparation of agriculture plans for the districts and the states based on agro-climatic conditions, availability of technology and natural resources.
4. To ensure that the local needs/crops/priorities are better reflected in the agricultural plans of the states.
5. To achieve the goal of reducing the yield gaps in important crops, through focused interventions.
6. To maximize returns to the farmers in Agriculture and allied sectors.
7. To bring about quantifiable changes in the production and productivity of various components of Agriculture and allied sectors by addressing them in a holistic manner.

LIVESTOCK

Major schemes implemented, by the Animal Resource Development Department, Govt. of Tripura during 2013-14 are as follows.

Veterinary services and animal health:

Veterinary services are rendered through a network of veterinary hospitals, veterinary dispensaries, veterinary sub-centers, disease investigation laboratories and also by organizing Animal Health Camps throughout the State. Under this scheme, State Department also undertakes opening of new centers/ veterinary dispensaries, repairing, remodeling, extension and up taking of new construction for field level veterinary institutions with a view to maintain proper working condition and standard

veterinary services for optimization of hygienic production of milk, meat and egg from livestock and birds. Another important task undertaken under the scheme for the works related with control of zoonoses including maintenance of Rapid Response Team (RRT) especially after emergence of Bird Flu in the country. Any lapse in such work may endanger survivability of both animal and human species.

Cattle and Buffalo Development:

The main objective of this scheme is to augment milk production of the State through introduction of improved germ plasma into the indigenous genetic pool of cattle by means of artificial insemination using frozen semen technology. The ultimate target group of this scheme is all the breedable cattle of the state. Tripura Livestock Development Agency (TLDA) has started functioning from 2009-10 as a special effort to increase milk production under the National Project for Cattle and Buffalo Breeding (NPCBB) and providing Artificial Insemination (AI) services at the door step of farmers.

Poultry Development:

The primary objective of the scheme is to augment poultry/duck egg and meat production, including broiler meat to make the state self sufficient. The State Animal Resource Development Department maintains poultry and duck breeding farms for production and supply of quality chicks and ducklings of Low Input Technology (LIT) variety. The major obstacle of poultry industry in Tripura is the cost of poultry feed. This scheme entails scope of huge employment generation for the youths of both urban and rural masses and especially to the weaker section people of the State. Accordingly, this is a high priority scheme of the ARDD.

Goat development:

The basic object of the scheme is to preserve and upgrade the unique character of "Black Bengal goat" through selective breeding and its scientific management. It is also planned to promote goat rearing by the forest dwellers through beneficiary oriented scheme.

Piggery development:

Pig rearing is now most popular activity of the State. The main objective of the Government to enhance pig production of the state by upgrading the local variety of pigs through cross breeding with the exotic pigs. It is also planned to promote pig rearing by the forest dwellers through beneficiary oriented schemes.

Other livestock development:

The main objective of the scheme is to popularize rabbit rearing in rural areas for production of non-conventional meat of rabbit as an alternative source for less cholesterol containing meat.

Feeds and fodder development:

This is one of the most vital schemes of the Department. In order to exploit optimum production potential of livestock and birds, quality feeds and fodder are the most vital components. As the State is mostly devoid of all important feed ingredients particularly the grain portion, for which the State has entirely depended on outside state resources. Under the feeds & fodder development programme cultivation of fodder and grass were undertaken and grazing facilities were developed for the milch animals. Development of fodder production in farmers land in the block level with definite programme involving panchayats.

There are 7 fodder seed production farms under State Government at i) RK Nagar Fodder Farm, ii) Devipur Fodder Farm, iii) Bir Chandra Manu Fodder Farm (South Tripura), 4) Nalicherra 5) Nalkata Fodder Farm 6) Gandhigram SPF and 7) Howaipari Pig Farm.

Extension and training:

The main objective of the scheme is to render modern technical knowhow of animal husbandry practices and to upgrade skill development of the professionals of the department and also of the farmer's in-respect of dairy development, cattle development, poultry development, duck development, quail development, goat development, piggery development, rabbit development. Such trainings will help overall augmentation of milk, meat and egg production of the state.

Veterinary education:

The main objective of this scheme is to undertake sample survey on regular basis to assess growth in different animal husbandry produces and its contribution to the GSDP. Under this scheme, the State Department is to undertake livestock census on every five years interval as a centrally sponsored scheme to calculate livestock and birds population of the State.

Assistance to Co-operative Societies:

The main target of the scheme is to re-vitalize milk cooperative sectors for processing and distribution of milk and also to make proper arrangement towards proper milk marketing system with a view to assure fetching justified remuneration on selling of milk by the actual producers.

FISHERIES



Training and extension

1. Training to fish farmers on scientific fish culture
2. Exposure visit of fish farmers outside the state
3. Exhibition/ Mela
4. Workshop at state/ district and block level
5. Conducting awareness camp



Fish production activities

1. Demonstration programme of various scientific fish culture technologies in private water bodies
2. Use of non-potential water bodies for fish culture
3. Adoption of fish culture in big water bodies
4. Fish culture through pen culture techniques
5. Scientific fish culture in small water bodies
6. Entrepreneurship development among SHGs through adoption of fish culture
7. Additional water areas brought under fish culture including the water areas under forest land
8. Use of balance fish feed for higher production of fish

9. Popularization of use of aerator in scientific fish culture
10. Supply of first year basic fishery inputs for undertaking fin fish culture and freshwater prawn culture under FFDA programme
11. Providing managerial subsidy to the fisherman cooperative societies
12. Distribution of fishing nets and boats to the poor fisherman
13. Distribution of fishery inputs to the fishery cooperative society for fish culture
14. Construction of dwelling houses for poor fisherman
15. Group accident insurance scheme

SCHEMES OF THE DEPARTMENT OF FISHERIES IN SOUTH TRIPURA:

With a view to attain self-sufficiency in fish production the government of Tripura did draw a perspective plan. Department of Fisheries started implementation of various developmental schemes under perspective plan. Deputy-Director of Fisheries, south Tripura is also implementing similar activities at district level.

1. Increasing Fish Production: To increase the fish productivity following demonstration programmes have been taken up by the department:

- i. Composite Fish Culture
- ii. Semi-intensive Fish Culture
- iii. Integrated Fish Culture with Ducks/ Pigs
- iv. Polyculture of fish with prawn.
- v. Intensive Fish Culture

A comprehensive approach for increasing overall fish production was undertaken through adoption of scientific fish culture under various demonstration programmes. Besides, entrepreneurship development among SHGs, development of model aquaculture villages, development of medium cost fish culture based special villages, development of prawn villages have been taken up by the department of fisheries in this district. Following are the special programmes that were taken by Department of Fisheries, Government of Tripura:

- i. Development of model aquaculture villages
- ii. Development of special aquaculture village
- iii. Development of prawn village
- iv. Entrepreneurship development among SHGs

- v. Fisheries Welfare Schemes
- vi. Production of fish seed and prawn seed
- vii. Development of Fisheries in open water bodies
- viii. Reclamation of old water bodies and creation of new water bodies
- ix. Welfare to fisheries cooperative societies

Other Activities under fisheries sector of south Tripura:

- a) To provide avenue for self employment and income generation, the department of Fisheries also paying role in fish culture activities through Self Help Group (SHG).
- b) Twenty-six fisheries Swabalamban cases sent DIC under this district.
- c) Twenty-five numbers Swarojgar Credit Card covering 4.43 lakh was done under fisheries sector of south Tripura District.
- d) Three fish feed factories are in operation in this district. Out of these, Two of the factories are at Udaipur (Matabari, Khilpara) and another one at Manu Bazar (Satchand).
- e) Few fish market shed was constructed at different places under the district
- f) Two soil and water testing laboratories are in operation at Udaipur and Belonia. Department of Fisheries has a plan to start up another three Soil and Water testing laboratory at Santirbazar, Sabroom and Amarpur.

**Table: Schemes and plans under Crop/Livestock/Fisheries sector in
South Tripura District**

1. Government Sponsored Programmes (On-going) in Tripura

Details of various Government sponsored programmes under implementation in the State of Tripura as also in Gomati and South Tripura districts are given here:

Sr. No.	Name of the programme	Objective	Partner Institution/ Agency	Eligibility Norms	Assistance/ Support (INR)
1.1	SGSY	Raising income of rural BPL families to at least Rs.2000/- P.M.	PRI/DRDA	Only BPL members in group of at least 10 with a minimum of 70% of BPL members in rural areas.	30% (max. Rs.10000/- for SC/ST and Rs.7500/- for others) for individual; 50% for groups (max. Rs.1.25 lakh, subject to per group).
1.2	SJSRY	To provide gainful employment to urban poor (BPL in urban area) or unemployed or underemployed through setting up of self employment ventures	Nagar Panchayat (Municipality)	Only BPL members; individuals or groups of at least 10.	Subsidy available @15% of the project cost subject to ceiling of Rs.7500/-. Margin money @5% of the total project is to be contributed by the beneficiaries.
1.3	PMEGP	Encourage self employment among rural and urban youth.	DIC	Individuals, no income ceiling. Class VIII passed for project cost more than Rs.10 lakh and Rs.5 lakh in	5% margin, 25%/35% subsidy in urban/rural area of project cost. Ceiling of project cost will be Rs.25 lakh and Rs.10 lakh for

				manufacturing and business/service sectors.	manufacturing and business/service sector respectively.
1.4	SWABALAM AN	generating self-employment for the unemployed youths	PRI/DRDA	APL / BPL	to develop sizable number of unemployed youth as potential entrepreneurs to take up self employment in different activities / trade / area of economic self reliance
1.5	Margin Money Scheme of KVIC	to provide margin money by way of subsidy to rural artisans / entrepreneurs.	KVIC /KVIB	All viable village industrial projects set up in rural areas are eligible for assistance under the scheme	Individuals (rural artisans / entrepreneurs) for projects upto Rs.10 lakh and institutions, cooperatives societies, trusts registered with KVIC / KVIB for projects up to Rs.25 lakh are eligible to get assistance under the scheme. KVIC provides margin money by way of subsidy at the rate of 25% of project cost up to Rs.10 lakh. Under the scheme, the borrower is required to provide his own contribution of at least 10% of

					project cost. In case of SC/ST and weaker section borrowers,
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2. Credit Linked Subsidy Schemes of Government of India

With a view to encouraging private investments in selected sectors and also developing adequate linkage, Government of India has introduced several credit linked subsidy schemes. Main feature of the schemes are given in the following table.

Sl. No.	Name of the programme/ scheme	Objective	Implementing agency	Eligibility/norms/ coverage	Nature of support/ Assistance (INR)
2.1	Construction /renovation/ expansion of rural godowns	Create storage facility in rural areas and prevent distress sales of produce, promote pledge financing and marketing credit	NABARD	Individual, farmers/ group of farmers, growers, cooperatives.	33.33% subsidy. 20% margin money and 46.67% bank loan.
2.2	Dairy Entrepreneurship Development Scheme (DEDS)	To promote setting up of modern dairy farm for production of clean milk, encourage heifer calf rearing for conserving good breeding stock, to bring structural changes in the unorganised sector so that initial processing of milk can be taken up at	ARDD, GOI/ NABARD	Farmers, individual entrepreneurs, NGOs, companies, group of organized (SHGs, Dairy Coop. Soc, Milk Union, Milk Federations etc.) and unorganised sectors	25 % of total outlay is provided as back ended capital subsidy. (33.33% for SC/ST farmers)

		village level, bring a upgradation in quality and traditional technology to handle milk on commercial scale and generate self employment and provide infrastructure mainly for unorganised sector.			
2.3	Poultry Venture Capital Fund (Subsidy) Scheme	To encourage poultry farming activity especially in non-traditional states and provide employment opportunities in backward areas, improve production of poultry products, improve productivity of un-scientifically run units through technology upgradation, provide quality meat to consumers in hygienic condition and improve productivity and facilitate rearing other poultry species like quails, duck,	ARDD, GOI/ NABARD	Farmers, individual entrepreneurs, NGOs, companies, group of organized and unorganised sectors which include SHGs, JLGs.	25 % of total outlay is provided as back ended capital subsidy. (33.33% for SC/ST farmers and NE States including Sikkim

		turkeys etc.			
2.4	CISS for commercial production units of organic inputs	Promoting organic farming and increase agricultural productivity, setting of vermin culture hatcheries, prevent pollution by converting organic waste into plant nutrient resources	National Project on Organic Farming	Individual, group of farmers/ growers, NGOs, SHGs	25% subsidy – ceiling of Rs. 20 lakh for bio fertilizer production units, Rs.1.50 lakh for vermin culture hatchery unit and Rs.40 lakh for fruit & vegetable waste compost unit.
2.5	Scheme for Dev./Strengthening of Agriculture Marketing Infrastructure Grading and Standardisation	Provided additional marketing infrastructure, promote direct marketing, increase the market efficiency, improve facilities for grading, quality certification system and standardisation.	Directorate of Marketing Of the State Govt.	Individual, group of farmers/growers, partnership firm, cooperatives, NGOs, SHGs Marketing Federation	33.33% subsidy with ceiling limit of Rs.60 lakh
2.6	Mother Units for Back yard poultry farms	Encourage small and marginal farmers, educated and unemployed youth, women, socially and economically backward sections of the society, to take up the activity of poultry sector	CBs, UCBs, RRB, SCB & SCARDB	Small and marginal farmers, educated and unemployed youth, women, SC ST population	Subsidy to the tune of ` 20000 and interest free loan to the extent of ` 36000/- for an average size of mother unit

2.7	CSS- Integrated Dev of Small Ruminants & Rabbits	Rearing of Sheep & Goats Sheep & Goats Breeding Farms Rabbit rearing units	CBs, UCBs, RRB, SCB & SCARDB	Individuals, Small and marginal farmers	Margin : Min. 10% IFL : 50% (sub. to ceilings) In case TFO is more, either entrepreneur to bring addl margin or bank can sanction addl loan.
2.8	CSS on Pig Development	Pig breeding farms Pig rearing & fattening units Retail outlets Facilities for live markets	CBs, UCBs, RRB, SCB & SCARDB	Individuals, SHGs, JLGs, FC, Cooperatives	33.33 % of total financial outlay as back ended capital subsidy for rearing average unit subject to a ceiling of ` 2.00 lakhs
2.9	Capital Subsidy cum refinance scheme of solar off-grid (Photo Voltaic an Thermal)	Promote grid application of Solar Energy both photo voltaic and Solar Energy)	CBS and RRBs	Individuals, Groups (Decentralised application under JNN Solar Mission)	50:30:20 of the unit cost, (CS of 30% as back ended to the borrowers with 3 year lock in period

3. Schemes of Government of India & Government of Tripura

Sl. No.	Name of the programme	Objective	Partner Institution/ Agency	Eligibility Norms	Assistance/ Support (INR)
3.1	Horticulture Mission Programme for NEH	Nursery Production of planting materials (Big/Small by Private/Public Sector) .	State Horticulture Department	Individuals, Groups (Share:50:50:: Govt.:Farmer) Private Sector Big Nursery: 4 ha/unit Small Nursery: 1 ha/unit Public Sector Big	Private Sector Big Nursery: 12.5 Lakh (50%) Small Nursery: 3.125 Lakh (50%) Public Sector Big Nursery: 25 Lakh (50%) Small Nursery: 6.25

				Nursery: 2 ha/unit Small Nursery: 1 ha/unit Production of 50000 seedling per ha.	Lakh (50%)	
3.2	Horticulture Mission Programme for NEH	Area Expansion under Horti. Crops (Fruits)	State Horticulture Department	Fruits (hectare/unit) Pineapple. Banana. Papaya. Banana(TC) High Density Planting. Mango @ 400 Nos. Guava @ 555 Nos. Musambi @ 500 Nos. Normal Spacing Mango (6x6 m) @ 278 Nos. Litchi (7.5x7.5 m) @ 180 Nos Ber (5x5 m) @ 278 Nos. Musambi (5x5 m) @400 Nos. Lemon (5x5 m) @ 400 Nos	Govt. Share 0.56250 0.39375 0.39375 0.56250 Govt. Share 0.36000 0.39375 0.36000 Govt. Share 0.18000 0.18000 0.18000 0.18000 0.18000 0.18000	Farmer Share 0.53250 0.53250 0.37605 0.46325 Farmer Share 0.20500 0.46325 0.19700 Farmer Share 0.28200 0.22700 0.30700 0.30700 0.22700
3.3	Horticulture Mission Programme	Area Expansion under Horti. Crops (Hybrid	State Horticulture	Winter Vegetable	Govt. Share	Farmer Share

	for NEH	Vegetables)	Department	(ha/unit)	(75%)	(25%)
				Cabbage	0.33750	0.11250
				Cauliflower	0.33750	0.11250
				Tomato	0.33750	0.11250
				Capsicum	0.33750	0.11250
				Potato(TPS)	0.33750	0.11250
				Brinjal	0.33750	0.11250
				Carrot	0.33750	0.11250
				Water Melon	0.33750	0.11250
				French Bean	0.33750	0.11250
				Summer Veg. (ha/unit)	0.33750	0.11250
				Cabbage	0.33750	0.11250
				Cauliflower	0.33750	0.11250
				Tomato	0.33750	0.11250
				Bhendi	0.33750	0.11250
				Cowpea	0.33750	0.11250
				Etc.	0.33750	0.11250
3.4	Horticulture Mission Programme for NEH	Area Expansion under Horti. Crops (Spices)	State Horticulture Department	Spices (ha/unit) Ginger Chilli	Govt. Share (75%) 0.1875 0.1875	Farmer Share (25%) 0.6250 0.6250
3.5	Horticulture Mission Programme for NEH	Area Expansion under Horti. Crops (Flowers)	State Horticulture Department	Flowers (ha/unit) Gerbera Rose Tuberose	Govt. Share (75%) 0.5250 0.5250 0.6755	Farmer Share (25%) 0.1125 0.1750 0.2250

3.6	Horticulture Mission Programme for NEH	Area Expansion under Horti. Crops (Water harvesting)	State Horticulture Department	Water harvesting size:1.0 ha/unit Community Tank/onfarm pond with use of plastic/RCC lining(100m x 100m x3m) Water harvesting system for individual (20m x 20m x 3m pond) Tube well/Dug well.	Govt. Share 17.25 1.03	Farmer Share 0.00 0.3500
3.7	Horticulture Mission Programme for NEH	Promotion of INM/IPM (Ha).	State Horticulture Department	Individual or group	Govt. Share (50%) 0.01	Farmer Share (50%) 0.01
3.8	Rashtriya Krishi Vikash Yojana (RKVY)	Development of Fodder (Late kharif/ Early Rabi)	State Animal Resource Development Department	Individual @ Rs.0.01 Lakh	Govt. Share 0.01	Farmer Share 0.00
3.9	Rashtriya Krishi Vikash Yojana (RKVY)	Stunted Growth of Fingerlings production	State Fishery Department	Individual @ Rs.0.15750 Lakh per unit	Govt. Share 0.1575	Farmer Share 0.15
3.10	Rashtriya Krishi Vikash Yojana (RKVY)	Integrated Duck-cum-Fish farming	State Fishery Department	Individual @ Rs.0.15000 Lakh per unit	Govt. Share 0.15	Farmer Share 0.00
3.11	Dairy Entrepreneurship Development	To promote setting up of modern dairy farm for	ARDD, GOI/ NABARD	Farmers, individual entrepreneurs, NGOs,	25 % of total outlay is provided as back ended capital subsidy.	

	t Scheme (DEDS)	production of clean milk, to bring structural changes in the unorganised sector, bring a upgradation in quality and traditional technology to handle milk on commercial scale and generate self employment etc		companies, group of organized (SHGs, Dairy Coop. Soc, Milk Union, Milk Federations etc.) and unorganised sectors	(33.33% for SC/ST farmers)
3.12	Poultry Venture Capital Fund (Subsidy) Scheme	To encourage poultry farming activity especially in non-traditional states and provide employment opportunities in backward areas, improve production of poultry products, improve productivity of un-scientifically run units through technology upgradation, and improve productivity and facilitate rearing other poultry species like quails, duck, turkeys etc.	ARDD, GOI/ NABARD	Farmers, individual entrepreneurs, NGOs, companies, group of organized and unorganised sectors which include SHGs, JLGs.	25 % of total outlay is provided as back ended capital subsidy. (33.33% for SC/ST farmers and NE States including Sikkim)
3.13	Mother Units for Back yard poultry	Encourage small and marginal farmers,	CBs, UCBs, RRB, SCB & SCARDB	Small and marginal farmers,	Subsidy to the tune of ` 20000 and interest free

	farms	educated and unemployed youth, women, socially and economically backward sections of the society, to take up the activity of poultry sector		educated and unemployed youth, women, SC ST population	loan to the extent of ` 36000/- for an average size of mother unit
3.14	CSS- Integrated Dev of Small Ruminants & Rabbits	Rearing of Sheep & Goats Sheep & Goats Breeding Farms Rabbit rearing units	CBs, UCBs, RRB, SCB & SCARDB	Individuals, Small and marginal farmers	Margin : Min. 10% IFL : 50% (sub. to ceilings) In case TFO is more, either entrepreneur to bring addl margin or bank can sanction addl loan.
3.15	CSS on Pig Development	Pig breeding farms Pig rearing & fattening units Retail outlets Facilities for live markets	CBs, UCBs, RRB, SCB & SCARDB	Individuals, SHGs, JLGs, FC, Cooperatives	33.33 % of total financial outlay as back ended capital subsidy for rearing average unit subject to a ceiling of ` 2.00 lakhs
3.16	Rashtriya Krishi Vikash Yojana (RKVY)	Piggery unit for breeding of piglets	State Animal Resource Development Department	Individual @ Rs.1.00 Lakh (1 Male+ 4 Female piglets)	Govt. share 0.90, farmer share 0.10
3.17	Rashtriya Krishi Vikash Yojana	Goatary unit for breeding of kids	State Animal Resource Development Department	Individual @ Rs.0.30 Lakh (1 Male+ 4 Female)	Govt. share 0.30, Farmer share 0.00

	(RKVY)			piglets)	
3.18	Rashtriya Krishi Vikash Yojana (RKVY)	Development of Fodder (Late kharif/ Early Rabi)	State Animal Resource Development Department	Individual @ Rs.0.01 Lakh	Govt. share 0.01, Farmer share 0.00
3.19	Rashtriya Krishi Bima Yojna	Compensation for loss of yield due to natural calamities.	State Department of Agriculture	Individual Farmers	50% State and 50% Central
3.20	Macro Management in Agriculture	Farm mechanization	State Department of Agriculture	Power Tiller @ Rs. 45000 /-	100 % Central

4. Schemes under State Bank of India

Sl. No.	Name of the programme	Objective	Partner Institution/ Agency	Eligibility Norms	Assistance/ Support (INR)
4.1	Banana cultivation	Establishment of new plantation	State Bank of India	Individual growers/ Corporate	15-25% margin money
4.2	Pineapple cultivation	Cultivation; Jungle clearing, Terracing , Land development, planting materials; etc., Maintenance of existing	State Bank of India	Individual growers/ Corporate	No margin money up to Rs.1.0 lakh 15-25% margin money for above Rs.1.0 Lakh

		Pineapple garden			
4.3	Fish Farming	<p>Excavation/renovation of the fish pond</p> <p>Construction of Infrastructures for allied activity in case of integrated fish farming</p> <p>Constructions of fencing/watch man shed/ go-down etc.</p> <p>Construction of fish eco-hatchery</p> <p>Procuring other materials like pump, net, boat etc.</p> <p>Construction of fish feed mill etc.</p>	State Bank of India	Individual/Fish Farmers Society/Company/SHG/JLG having scientific knowledge on fish farming etc. Land should be myadi, if leased then it should be registered. Site should be flood free low lying area with maximum water retention capacity.	15-25% margin money of the project cost
4.4	Dairy	Construction of Dairy shed, purchase of quality milch animals, milking machine, chaff cutter or any other equipment required for the	State Bank of India	<p>Individual farmers</p> <ul style="list-style-type: none"> - Members of milk societies - Age: Less than 65 years. - Individual dairy unit having less than 10 	No margin money up to Rs.50,000 10% margin money for above Rs.50,000 and up to Rs. 5 lacs.

		purpose.		animals. Land: - 0.25 acre for every 5 animals. - 1.00 acre for every 10 animals for growing fodder	
4.5	Goatery	Construction of shed, purchase of quality animals or any other equipment required for the purpose.	State Bank of India	Individual farmer Age: less than 65 years	15-25% margin money
4.6	Poultry(Broiler)	Construction of shed, purchase of chicks, feed and equipments, also finance feed manufacturing units.	State Bank of India	Individual farmer Age: less than 65 years	15-25% margin money
4.7	Piggery	Construction of shed, purchase of chicks, feed and equipments.	State Bank of India	Individual farmer Age: less than 65 years	15-25% margin money
4.8	Kisan Credit Card	Credit limit based on scale of Finance (SOF) for Crop	State Bank of India	KCC burrowers below 70 years of age are	If SOF is applied for financing – No margin. If cost

		loan. Total limit is inclusive of 20% of production credit as contingency credit/ consumption loan. Limit is valid for 3 years subject to Annual Review.		covered under personal Accident Scheme (PAIS). Eligible crops are also covered under crop "Crop Insurance Scheme (NAIS)".	of cultivation is worked out and financed (in absence of SOF) - No margin up to Rs. 1.0 lakh 15-25% margin money for above Rs.1.0 lakh
4.9	Self Help Group	Formation of group and Bank loan for SHG activities	State Bank of India	<ul style="list-style-type: none"> - Active existence of SHG for at least 6 months. - Size preferable between 10-20 members. - Maintaining proper Bank Account. - Undertaking saving and credit operation from its own fund. 	Loan limit- up to 4 times the crop fund
4.10	Joint liability Group	Formation of group and Bank loan for JLG activities	State Bank of India	<ul style="list-style-type: none"> - Size preferable between 4-9 members - Singly or group mechanism against mutual guarantee. - Minimum financial administration 	Loan limit- up to Rs. 50,000/- per individual or group

				within the group.	
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CHAPTER-VII. FARM MACHINERIES SUITABLE TO THE DISTRICT

The following implements and machineries are suitable for the district for quicker, drudgery reduction and reduction in cost of cultivation.

Table: Farm machineries suitable to the district

Sl. No.	Name of Implements & Machineries prioritized	Purpose
1	Animal drawn MS/Steel Plough, Mould board Plough, Puddler, Clod Crusher, Leveller	For seed bed preparation/Primary & secondary tillage, Puddling, Levelling
2	Power tiller attached Mould board Plough, Puddler, Clod Crusher/Leveller, Seed drill	For seed bed preparation/Primary & secondary tillage, puddling, Levelling
3	Tractor drawn M. B. Plough, Disc Plough, Cultivator, Disc Harrow, Puddler, Leveller, Seed drill	For seed bed preparation/Primary & secondary tillage, Puddling, Levelling
4	Metallic dibbler, Paddy Drum seeder, Manual & Power operated rice transplanters, Seed drills, Vegetable Planter, Adjustable row marker	For seeding & transplanting crops & vegetables
5	Diesel, Electric Pump sets, submersible pump set, solar pump set	For irrigating crops
6	Drippers and Sprinklers	For Micro irrigation
7	Manual & Power operated sprayers, duster, Foot sprayer	For control of pest & diseases
8	Rotary weeder, Cono weeder, Power weeder, Power brush cutter, Long handled weeders, Wheel hoe, Khurpi, Hand grass slasher	For weeding, jungle cutting & interculture of different crops and lawns
9	Sickle, Self propelled reaper, Chaff cutter, Fruit harvesters, Potato, Groundnut	For harvesting of Paddy, Fodder, other crops, fruits

	harvester, Tea leaf cutter	and tea leaf cutting
10	Groundnut decorticator, Manual maize sheller, Pedal operated coconut dehusker	For separation of husk & nuts, cobs
11	Pedal operated thresher, Power thresher,	For threshing Paddy & other crops
12	Pruning secateur, budding & grafting knife	For pruning fruit trees, budding & grafting/vegetative propagation
13	Winnowing, Seed cleaner (2 screen)	For Cleaning seed/grains
14	Wheel barrows, Tractor drawn trolley, Power tiller trolley	For transport of farm yard manure, produces, wastes
15	Gola (Bamboo baskets), Metallic bins, RCC storage structures	For storage of Farm produces

CHAPTER VIII. ANNEXURE

1. Telephone directory/Address of important agriculture and related departments/ offices in and around South Tripura district

a. Contract Numbers of Different Line Departments under South Tripura District

SI No.	Name or Designation	Telephone Number (O)
	District Forest Officer, South Tripura	03821-22240
	Divisional Forest Officer, Bokafa	03823-262233
	Wild Life Warden, Trishna, Belonia	03823-267340
	Addl. General Manager, TSECL, South Tripura	03821-222340
	Deputy General Manager, TSECL, Belonia	03823-222620
	Deputy General Manager, TSECL, Bokafa	03823-262523
	Deputy General Manager, TSECL, Sabroom	-
	Deputy Director, Agriculture Deptt., South Tripura	03821-222248
	Deputy Director, Horticulture Deptt., South Tripura	03823-262245
	Deputy Director, Education Deptt., South Tripura	03821-222472
	Deputy Director, ADD Deptt., South Tripura	03821-222374
	Supdt. Of Sericulture Deptt., South Tripura	03823-272442
	Deputy Director, Fisheries Deptt., South Tripura	03821-222491
	Deputy Director, Youth & Sport, South Tripura	03821-224649
	Deputy Director, Food, South Tripura	03821-222288

b.

	Zonal Development Officer, TTAADC, B.C.Manu	03823-252297
	District Transport Officer, South Tripura	03821-223724
	General Manager, DIC, South Tripura	03821-222406
	Chief Medical Officer, South Tripura	03823-222204
	SDMO, Belonia	03823-222204
	SDMO, Sabroom	03823-270950
	Dy. Director, SW&SE, South Tripura	03821-222224
	In-charge, DISE, South Tripura	03823-264258
	CDPO, Rajnagar	03823-264258
	CDPO, Hrishyamukh	03823-268357
	CDPO, Bokafa	03823-262002
	CDPO, Jolaibari	03823-263575
	CDPO, Satchand	03823-266336
	CDPO, Rupaichari	03823-275264
	CDPO, Belonia NP	03823-224840
	CDPO, Sabroom NP	03823-270144

District Level Quick Response Teams of South Tripura District

In order to face any kind of challenging situation emerging out of natural calamity/ phenomena like flood, storm, cyclone, gale, earthquake etc. District level quick response teams comprising of the following sub-committees with a skeleton of officer & Staff member are hereby constituted as under.

Sl. No.	Name of Sub-Committee.	Name of the Officer/ Staff	Post held	Telephone No./ Mobile No.
I	Warning Committee	1. S. Choudhury, Addl. DM & Collector, South Tripura.	Leading officer	222-102/9436992730
		2 .Sri T.K. Chakma. LAO.	Member	9436503107
		3.Sri Ram Lal Saha, PA-I	Member	9774139607
		4. Sri Rashu Ch. Dey, UDC.	Member	9436517028
		5. Sri Nitai Sen, Peon.	Member	
II	First Aid Committee	1. Dr. Jugadish Nama, Medical Officer, Belonia Govt. Hospital	Leading officer	9436502453
		2. Sri Nirmal Das Gupta, Asstt. Director, ARDD, Belonia.	Member	222-244
		3. Sri Sushil Mog, UDC.	Member	8794763026
		4. Sri Pradip Paul, LDC.	Member	9612150103
		5. Sri Sabru Mohan Tripura, Peon.	Member	
III	Search & Rescue Committee	1. Executive Engineer, PWD (R&B), Belonia.	Leading officer	222-210
		2. Sri Sekhar Lal Das, Asstt. Director (Food)	Member	9436545324
		3. Sri Ramu Saha, Amin.	Member	9436587692
		4. Sri Tapan Nama, LDC.	Member	9612260683
		5. Sri Bhabatosh Majumder, Peon.	Member	
IV	Shelter Management Committee	1. Sri Babul Paul, Asstt. Director (Agri) TW.	Leading officer	9436517150
		2. Asstt. Research Officer, Planning, Belonia.	Member	
		3. Sri Ashok Das, PS-IV.	Member	9774599974
		4. Sri Rakhal Sen, UDC.	Member	9436502422

		5. Sri Anil Ch. Biswas, Chainman.	Member	
V	Relief & Coordination Committee	1.Sri Dhanu Majumder, Executive Engineer, PWD (DWS), Belonia.	Leading officer	9436470729
		2. Sri Satyabrata Goswami, Elec-Inspector.	Member	
		3.Sri Radha Mohan Jamatia, PS-II	Member	986289340
		4. Sri Pradip Kar, LDC.	Member	8794231170
		5. Sri Ajoy Debnath, Peon.	Member	

Sl. No.	Name of Sub- Committee.	Name of the Officer/ Staff	Post held	Telephone No./ Mobile No.
VI	Damage & Assessment Committee.	1. Executive Engineer, PWD (WR), Belonia.	Leading officer	222-422
		2. Sri Goutam Majumder, Supdt. Of Agriculture.	Member	222- 275/9436135465
		3. Sri Upendra Jamatia, E.E, RD, Santirbazar.	Member	272- 272/9436121770
		4. Sri Jiban Das, UDC.	Member	9436506840
		5. Sri Haradhan Paul, Peon.	Member	
VII	Trauma Counseling and Rehabilitation Committee	1. Sri Animesh Deb Barma, O/C Dev. DM's office Belonia.	Leading officer	9436136195
		2. Sri Nirmal Das Gupta, Asstt. Dir. ARDD,Belonia.	Member	222-244
		3. Sri Rupak Das, UDC.	Member	9862518145
		4.Sri Joyanta Chakraborty, LDC	Member	9436588222
		5. Sri Sukumar Baidya, Peon.	Member	

c. District Level Core Teams of South Tripura District

As per the decision of the Government District Level Core Team for Disaster Management, South Tripura District Belonia is hereby constituted comprising the following Sub- Committee's with selection officers and staff members as under.

Sl. No.	Name of Sub-Committee.	Name of the Officer/ Staff	Post held	Telephone No./ Momile No.
I	Rescue	1. Executive Engineer, PWD (R&B), Belonia..	Leading officer	222-210 /9436125341
		2 .Sri T.K. Chakma. LAO.	Member	9436503107
		3.Inspector of school, Belonia.	Member	222-209/224-339
		4. Sri Uttam Tripura, LDC.	Member	9862772604
II	Medical and First Aid Committee	1. Dr. Tapash Sarkar, Medical Officer(Ayourbadic), Belonia Govt. Hospital	Leading officer	9436136067
		2. Sri Nirmal Das Gupta, Asstt. Director,ARDD, Belonia.	Member	222-244
		3. Sri Elandra Marak, Labour Inspector, Belonia.	Member	9862764760
		4. Sri Mintu Kuri, LDC.	Member	9612515963
		5. Sri Gangadhar Reang, Peon.	Member	
III	Evacuation	1. Sri Babul Paul, Asstt. Director (Agri) TW.	Leading officer	9436517150
		2. Sri Dipankar Das, Inspector of Excise.	Member	9436182936
		3.O/C, Belonia Fire	Member	222-228/101

		Service.		
		4. Sri Tejendra Baihya, LDC.	Member	9612718195
		5. Sri Galiram Reang, Peon.	Member	
IV	Rehabilitation	1. Sri Hiralal Deb Barma, Senior Deputy Magistrate, Belonia.	Leading officer	222-033 /9436122160
		2. Executive Engineer, PWD (R&B), Belonia..	Member	222-210 /9436125341
		3. Sri Dipak Baidya, Supdt. Of Horticulture, Belonia.	Member	222-675 /9612690569
		4. Sri Upendra Jamatia, E.E, RD, Santirbazar.	Member	272-272 /9436121770
		5. Sri Mandar Tripura, Peon (TW).	Member	
V	Damage & Assessment Committee.	1. Sri Pritesh Das, SDO, PWD(R&B) Belonia.	Leading officer	222-410
		2. Sri Laxman Goswami, SDO, PWD (DWS) ,Belonia.	Member	222-446
		3. Sri Goutam Majumder, Supdt.of Agriculture, Belonia.	Member	222-275/9436135465
		4. Sri Badal Biswas, LDC.	Member	

d. Contract Numbers of Civil Administration Under South Tripura District

Sl. No.	Name or Designation	Telephone Number (O)
	District Magistrate & Collector, South Tripura	03823-222012
	Addl. District Magistrate & Collector, South Tripura	03823-222102

	Sub-Divisional Magistrate, Belonia	03823-222231
	Sub-Divisional Magistrate, Sabroom	03823-270225
	Sub-Divisional Magistrate, Santirbazar	03823-272688
	Block Development Officer, Rajnagar	03823-264221
	Block Development Officer, Hrishyamukh	03823-268295
	Block Development Officer, Satchand	03823-266228
	Block Development Officer, Rupaichari	03823-272231
	Block Development Officer, Bokafa	03823-262238
	Block Development Officer, Jolaibari	03823-263003

e. Contact Numbers of Police Administration Under South Tripura District

Sl. No.	Name or Designation	Telephone Number (O)
	Superintend of Police, South Tripura	03823-222218
	Addl. Superintend of Police, South Tripura	
	SDPO, Belonia	03823-222203
	SDPO, Santirbazar	03823-272762
	SDPO, Sabroom	03823-270249
	O/C, P.R.Bari Police Station	03823-264365
	O/C, Belonia Police Station	03823-222203
	O/C, Hrishyamukh Police Station	03823-268671
	O/C, Manu Police Station	03823-266236
	O/C, Sabroom Police Station	03823-270222
	O/C, Manubankul Police Station	03823-275316
	O/C, Rajnagar Fire Service	03823-264377
	O/C, Belonia Fire Service	03823-222228
	O/C, Santirbazar Fire Service	03823-262244

	O/C, Manu Fire Service	03823-266201
	O/C, Sabroom Fire Service	03823-270244

f. Contract Numbers of Engineering Wings under South Tripura District

SI No	Name or Designation	Telephone Number (O)
	Superintending Engineer, RDC-II, South Tripura	03821-224739
	Superintending Engineer, PWD(DWS), South Tripura	03821-223247
	Superintending Engineer, PWD(R&B), South Tripura	03821-223533
	Superintending Engineer, PWD(WR), South Tripura	03821-224631
	Executive Engineer, RDSD-II, Satchand	03823-266655
	Executive Engineer, RDSD-IV, Santirbazar	03823-272272
	Executive Engineer, PWD(R&B), Belonia	03823-222210
	Executive Engineer, PWD(R&B), Sabroom	03823-270603
	Executive Engineer, PWD(R&B), Santirbazar	03823-262235
	Executive Engineer, PWD(DWS), Belonia	03823-224812
	Executive Engineer, PWD(WR), Belonia	03823-222422

g. Address of nurseries in and around South Tripura District

Sl. No.	Name of Nursery	Address	Deals with
1	Prayash Small Nursery.	West Jalefa, Satchand.	Mango, Banana, Guava, Musambi etc.
2	Netaji SHG.	B.C. Manu, Bagafa.	Mango.
3	Udaiyaman Small	Kusamara, Kakraban,	Coconut, Mango.

	Nursery.	Udaipur.	
4	North Srirampur.	Sidhi Nagar, Rajnagar, Belonia.	Mango,Banana,Cashewnut,Lit chi.
5	Vivekananda Colony.	Sarashima, Hrishyamukh, Belonia.	Mango, Litchi, Cashewnut,Lime,Ber.
6	Bandhan SHG.	North Jolaibari, Bagafa.	Mango, Guava,Litchi,Lime,Banana.
7	Muhuripur. Panchayat Nursery.	Muhuripur, Bagafa.	Mango,Coconut, Arecanut,Banana.
8	Puspita.	Kunjaban, Matabari.	
9	Thaingbong.	ADC Village, Satchand.	Mango,Banana, Musambi.
10	Sabuj Sathi.	Salghara, Matabari.	Mango, Banana,
11	Lucky	Baishnab Charra, Jamjuri, Kakraban.	Mango, Banana, Musambi, Ber, Guava.
12	Joykumar Jamatia.	Kanchani Kaloni, Bagma, Matabari.	Mango,Guava,Musambi,Bana na.
13	Md. Ali Aswab.	Hadra, Udaipur.	Mango,Litchi,Coconut.
14	Sahid Dhananjoy Smriti.	Barpathari, Rajnagar.	Musambi, Scented Lime, Mango, Guava, Coconut, Cashewnut.
15	Jashmura Dasarath Smriti.	Barpathari, Rajnagar.	Mango, Litchi,Guava, Papaya.
16	Dhuptali ADC, Nipen Chakraborty Smriti Bog Nursery.	Matabari, Udaipur.	Banana, Mango,Guava,cashewnut, Musambi.

h. Address of Soil Testing Laboratory

1. Soil Testing Laboratory

Gokulpur, Deputy Director of Agriculture,
Gomati, Tripura.

2. KVK, South Tripura, P.O. Manpathar, Bokafa,South Tripura.

i. Information regarding the Govt. Orchards in and around South Tripura District.

Sl. No	Name of Orchards.	Location.	Planting materials raise.
1	2	3	6
1	Rangkang. G.O.	Amarpur.	Litchi, A/Lemon,Coconut,Papaya.
2	Tuidu S.C.O.	Ompi.	Litchi, Orange,A/Lemon, Papaya.
3	Lebacharra T.C.O.	Karbook.	Litchi.
4	Kalashi M.O.	Bagafa.	Litchi, A/Lemon,
5	KTC M.O.	Bagafa.	Litchi,Coconut,Papaya,Banana.
6	R.K. Ganja S.C.O.	Bagafa.	Litchi, Papaya,sweet Lemon, Elephant foot Yam.
7	Baspadua CPC.	Hrishyamukh.	Mango, Coconut, Jackfruit.
8	Sarashima RTCF	Hrishyamukh.	Mango, Coconut, Arecanut, Papaya, Jackfruit.
9	Joykatpur Spice.	Hrishyamukh.	
10	Radhanagar TCO.	Rajnagar.	Mango, Banana.
11	Udaipur P.O.	Udaipur.	Litchi,Orange,Coconut,Papaya, Scented lemon.
12	Fulkumari TCO.	Udaipur.	A/Lemon, Jackfruit.
13	Kaladepa M.O.	Satchand.	Litchi, Papaya, Banana,Black Peper, Jackfruit.
14	S.H. Charra M.O.	Satchand.	Mango, Papaya, Banana, Black Peper.

2. Average nutrient content of common manures and Fertilizers

Material	Nutrient content (%)		
	N	P ₂ O ₅	K ₂ O
Ammonium sulphate	20.5	-	-
Ammonium sulphate nitrate	26.0	-	-
Ammonium nitrate	33.5	-	-
Ammonium phosphate	20.0	20.0	-
Calcium ammonium nitrate	20.5/25.0	-	-
Nitrate of soda	16.5	-	-
Urea	46.0	-	-
Superphosphate (single)	-	18.0	-
Superphosphate (double)	-	35.0	-
Superphosphate (triple)	-	49.0	-
Mussooriephos	-	18-20	-
Rajphos	-	18-20	-
Muriate of potash	-	-	50/60
Bone meal	3.5	21.0	-
Fish meal	4.1	3.9	0.3-1.5
Poultry manure	1.2-1.5	1.4-1.8	0.8-0.9
Sheep manure	0.8-1.6	0.3-0.4	0.3-0.4
FYM	1.0	0.5	1.0
Compost	0.5	0.4	0.8
Groundnut cake	7.0	1.5	1.5
Castor cake	4.3	2.0	1.3

Neem cake	5.0	1.0	1.5
Gingelly cake	6.2	2.0	1.2
Coconut cake	3.0	1.9	1.8
Vermi-compost	1.5	0.4	1.8
Cow dung	1	0.5	1

3. Preparation of safer pesticides for common use

a. Insecticides

1. Neem Leaf Extract (NLE)

Effective as a antifeedent/repellent/deterrent against grasshoppers, gundhi bug, stem borer, and many other chewing insects particularly lepidopterans. The leaf should be ground into paste in mechanical grinder. The effective concentration of NLS ranges from 3% to 5%. For obtaining 3% concentration, 30ml of extract of leaf is required to add per litre of water.

2. Neem Seed Kernel Extract (NSKE 4%)

Grind dried neem seed kernels (400g) in to coarse powder. Take 40 g of this powder and tie it in a fine muslin cloth, soak overnight in 500 ml of water in a container. Shake and filter the suspension with water to make 1000 ml volume. Add 2 g of soap to this solution (NSKE 4%) and use for spray. NSKE helps in the management of *Spodoptera*, *Helicoverpa*, semiloopers, leaf folders and sucking pests including mites.

3. Tobacco Decoction

Boil 0.5 kg tobacco dust in 5 liters of water for 30 minutes to attain coffee red colour. Add water to the boiling solution to make 5 litres volume. Cool and filter the decoction using a thin muslin cloth. Add soap @ 2 g/l and dilute to 40 to 50 litres for spray. This preparation is effective against whitefly, aphids, and leafhoppers.

Note: Tobacco decoction should not be used for more than once, as it is toxic to natural enemies.

4. Cattle-dung and Urine Extract

Add Cattle-dung (2kg) and urine (2 liters) thoroughly in 2 liters of water in a container and allow this mixture for 4 days by keeping a lid over the container. After 4 days, filter and add 40 grams of lime to this solution. Dilute the solution in 32 liters of water, which is sufficient for spraying one kani (unit for land area in Tripura). Spraying cow dung urine solution prevents eggs lying by the moth, e.g. *Helioverpa* and *Spodoptera*, etc. It is found to give protection against some diseases and the sprayed crop looks green and healthy.

b. Preparation of common fungicides

1. Bordeaux mixture (1%)

1 kg of copper sulphate should be dissolved in 50 litres of water. Take another container with 50 litres of water and add 1 kg of quick lime in it. Pour both the mixture in third container at the same time simultaneously so that the edge of both the liquid mixture attaché each other. Stire the mixture slowly for proper mixing of it. Testing of mixture is required before use for the presence of free copper by dipping a polished knife in it. If the blade shows a reddish colour due to the deposits of copper, add more lime till the mixture become nutral. Always use wooden, earthen or plastic container for the preparation of Bordeaux mixture. In order to confer sticking qualities to Bordeaux mixture, rosin washing soda mixture, may be added. The addition of the sticker is particularly recommended for sprayings conducted during rainy season.

2. Bordeaux paste

Dissolve 100 g of copper sulphate and 100 g of quick lime each in 500 ml of water separately. Mix together to make one litre of the paste.



Discipline: Agronomy:



Discipline: Horticulture:



Grafted Seedlings of amrapali mango in farmer's field.

Discipline: Agriculture Engineering



Discipline: Animal Science



Discipline: Fisheries Science



Discipline: Home Science



Integrated Farming system:



Participation in Activities:



Staff information

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	Dr. B. Debnath	SMS/T-6	Fisheries	9774610910	debnath_biswajit@rediffmail.com
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Group photo of staffs,kvk South Tripura

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