

# Agriculture Scenario of Tripura

## Total cultivable land

Tripura has a total cultivable land of 2,80,000 hectares and irrigation potential of 1,27,000 hectares. Out of the available water resources 79,000 hectares can be brought under assured irrigation through surface water and 48,000 hectares through ground water.

## Operational holdings

The activities of agriculture and allied sector in the State by and large are in the hands of small and marginal cultivators. The data reveals the fact clearly as follows.

Holdings:		
i)	Number of marginal holding (Below 1.0 hec.)	2,47,380(82%)
ii)	Number of small holding (1.0 hec- 2.0 hec.)	40,409 (13%)
iii)	Number of medium and large holding (above 2.0 hec.)	13,238 (5%)
Area Operated:		
i)	Marginal holding (in hec)	80,513 (44%)
ii)	Small holding (in hec)	55,879 (31%)
iii)	Total marginal and small holdings (in hec)(i+ii)	1,36,392 (75%)
iv)	Medium and large holdings (in hec)	44,829 (25%)
	Average size of holdings	
	Total number holding (in nos)	3,01,027
	Total operated area (in hec)	1,81,221
	Average size of holdings (in hec)	0.6
Source: - Revenue Department, Tripura		

## Measuring of field under Crop Cutting Experiment in Paddy Perspective Plan for agriculture

The Perspective Plan for achieving self sufficiency in foodgrains production has been implemented in the state since 2000-01. The measures envisaged under the plan includes increasing the area under kharif and rabi paddy; introduction of hybrid paddy and maize; bringing one lakh hectares under the SRI cultivation of paddy; promoting short duration HYV varieties for increasing the cropping intensity; promoting the use of bio- fertilizer, micro nutrients and chemical fertilizers; increased flow of credit and need based crop specific training to farmers. The measures had been instrumental to increase the foodgrains production from 5.13 lakh tons

before Perspective Plan to 7.30 lakh tons at the end of the plan and more than 2 lakh tons of additional rice has been produced in the State.

The gains in the Perspective Plan namely HYV seed production through registered growers, well accepted SRI method of cultivation, line sowing, seed replacement, varietal replacement, increased use of chemical fertilizers, popularizing use of bio-fertilizers, increase in irrigation sector among others. The increased credit flow is further intensified for maintaining the growth trends in production and productivity in the future days to come.

### **Road map for agricultural development**

The special thrust has been given for increasing production and productivity of the following crops under the said Road Map.

Cereals: Paddy, maize, nutri-cereals (foxtail millet, locally called as *Kaon*).

Pulses: Arhar, blackgram, cowpea, lentil, moong, field pea, soybean and rajmash.

Oilseeds: Rape and mustard, sesamum, groundnut and linseed.

Thrust has also been given for crop diversification through utilization of seasonal rice in fallow lands which at present accounts for about 1.44 lakh hectares. A portion of the total rice fallow lands (0.74 lakh hectares) has been targeted to be brought under cultivation with suitable cropping sequence.

### **Increase in use of chemical fertilizers**

Integrated Nutrient Management for maintaining sustainable production and to maintain soil health and fertility by using macro and micro nutrients blended with organic manures, vermicompost and bio-fertilizers is the key for increasing production of crops. Use of chemical fertilizers in the state has been increased to 58,432 MT.

### **Increase in irrigation potential**

An estimate was made by a team of experts of Central Water Commission and State Water Resources Department to ascertain the irrigable land in the state. It was primarily assessed that 1,17,000 hectares of land could be brought under assured irrigation availing feasible components of non-monsoon run-off and ground water storage, which may now likely to increase up to 1,78,000 hectares.

Irrigation infrastructure so far has been developed in the state through various projects which includes, lift irrigation, diversion, DTW, medium irrigation, shallow tube well, artesian well, tank, 5HP pumps etc, for covering 1.13 lakh hectares. Recent assessment of Central Ground Water Board has revealed that the overall exploitation of ground water in the state is about 10 percent of the total potential only. Agriculture Department has taken steps for tapping the ground water potential for irrigation purpose and accordingly, 1814 small bore deep tube wells have been installed.

### **Increase in flow of credit to agriculture**

The scheme of Kisan Credit Card (KCC) has been started more than a decade ago with a coverage of 4.21 lakh farmers against the 4.90 lakh farm households, which is over 86 percent of the farm households. The coverage requires to be increased after taking into account farm households allotted with the land under Forest Right Act. Appropriate intervention from the Government of India is required for further increase in the credit flow to the agriculture and allied sector. The NABARD and other financial institutions are approached to extend more investment in agriculture sector as per RBI guidelines.

### **Cropping pattern**

The Cropping pattern in Tripura acquires typical character of hill agriculture in the North Eastern Region where two distinct and parallel farming systems viz., (i) shifting cultivation or jhum in the hill slopes (ii) settled farming in the plains are in vogue. Rice is the pre-dominant crop in both the systems.

The State grows three seasonal rice crops viz. aush, aman and boro in the settled farming areas including wide range of food and non-food crops.

The below noted table reveals the cropping patterns in the State:

**The cropping pattern in the State depicts that about 60 percent area of gross cropped area accounts for food grain crops and 21 percent of under horticultural crops.**

### **Land Use Statistics**

<b>LAND USE STATISTICS ( AREA IN HA)</b>		
<b>Sl. No.</b>	<b>LAND USE CLASSES</b>	<b>2020-21 (P)</b>
1	Geographical area	1049169
2	Forest Area	629426
3	Land Not Available for Agri Use	140775
4	Land put to non Agri. use.	8213
5	Barren & uncultivable land	148988
	<b>Total (3+4)</b>	
6	Land under Misc.tree Crops & groves not including in net Area sown	9838
7	Permanent pasture & other grazing land	888
8	Culturable Waste land	2478
9	<b>Total (6+7+8)</b>	<b>13204</b>
10	Fallow Land	896
11	Current Fallow	1189
	Fallow Land Other than Current fallow	
12	<b>Total (10+11)</b>	<b>2085</b>
13	<b>Net Cropped area</b>	<b>255466</b>
14	<b>Gross cropped Area</b>	<b>487400</b>
15	Area sown more than once	231934
16	<b>Cropping Intensity (%)</b>	<b>191</b>
17	<b>Cultivable land</b>	<b>270755</b>

<b>Area, Production &amp; Yield of Agricultural Crops during 2020-21(2 nd Advance Estimate)</b>			
<b>Name of Crops</b>	<b>2020-21 (2 nd Advance Estimate)</b>		
	<b>Area in Ha</b>	<b>Production in MT</b>	<b>Yield in Kg/Ha</b>
Aush	34881	93760	2688
Aman	147750	475016	3215
Jhum	15493	16423	1060
<b>Total Kharif Rice</b>	<b>198124</b>	<b>585199</b>	<b>2954</b>
Total Kharif Maize	13456	23548	1750
Sorghum	189	161	852
Foxtail / Kaon	978	782	800
<b>Total Foxtail / Kaon &amp; Sorghm</b>	<b>1167</b>	<b>943</b>	<b>808</b>
Arhar	5191	4049	780
Moong	1879	1212	645
B/Gram	4856	3472	715
Cow pea, Assam valley etc	3855	3123	810
Rajmash	13	12	923
<b>Total Kharif Pulses</b>	<b>15794</b>	<b>11868</b>	<b>751</b>
<b>Kharif Foodgrains</b>	<b>228541</b>	<b>621558</b>	<b>2720</b>
Sesamum	6056	4088	675
Kharif Ground nut	1075	1548	1440
Soyabean	7	5	714
<b>Total Kharif Oilseed</b>	<b>7138</b>	<b>5641</b>	<b>790</b>
Jute *	429	3754	8.75
Mesta *	255	2206	8.65
<b>Total Jute &amp; Mesta</b>	<b>684</b>	<b>5960</b>	<b>8.71</b>
Cotton **	589	895	1.52
Sugarcane	741	41663	56225
Boro Rice	66500	219317	3298
Wheat	150	343	2287
Rabi Maize	6000	14910	2485
Foxtail / Kaon ( R )	600	510	850
Moong	2150	1613	750
Black gram	3500	2800	800
Lentil	2250	1631	725
Pea	4500	3938	875
Gram	255	159	624
Khesari	50	34	680
Rajmash	1055	897	850
<b>Total Rabi Pulses</b>	<b>13760</b>	<b>11072</b>	<b>805</b>
Rape & Mustard	8500	7242	852
Rabi Groundnut	1250	1938	1550
<b>Total Rabi Oilseed</b>	<b>9750</b>	<b>9180</b>	<b>942</b>
<b>Rabi Foodgrains</b>	<b>87010</b>	<b>246152</b>	<b>2829</b>
<b>Total Foodgrains</b>	<b>315551</b>	<b>867710</b>	<b>2750</b>
<b>Total Rice</b>	<b>264624</b>	<b>804516</b>	<b>3040</b>

\* indicates Production in Bales of 180 Kg each.

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**Crop diversification:** As a part of crop diversification, State Government has given special thrust for increasing area and production of pulses and oilseeds in the State since pulses and oilseed policies have been adopted, separately.

Approach and strategy for increasing pulses and oilseed cultivation:

- i) Bringing additional area under cropping systems,
- ii) Increased production and productivity,
- iii) Area based approach,
- iv) Crop specific approach,
- v) Seed village approach,
- vi) Processing,
- vii) Front line demonstration/ Block demonstrations,
- viii) Oil seed production shall be increased by increasing the area through inclusion in cropping sequence once in a year,
- ix) Adopting high productivity and high oil content varieties can also increase production,
- x) Emphasis should be given on problem-oriented research,
- xi) 50-100 percent seed replacement of high yielding improved varieties of oilseeds,
- xii) More area to be brought under irrigation,
- xiii) Use of organic manure and chemical fertilizer,
- xiv) Easy credit flow to oil seed cultivators,
- xv) Training and re-training of farmers as well as field personals.

### **Cold Storage**

There are 10 cold storages are functioning in the state with capacity of 26,700 MT. Out of these, 7 cold storages with total capacity of 11,700 MT are functioning under the control of the State Agriculture Department and 3 more cold storages at Kashipur (Sherowali), Bamutia and Haplong with additional capacity of 15,000 MT are run by the private agencies. The details of those cold storages of the Agriculture Department are shown below.

1	Satchand cold storage	1000 MT
2.	Baikhora cold storage	2000 MT
3.	Belonia cold storage	1700 MT
4.	Amarpur cold storage	1000 MT
5.	Melaghar cold storage	3500 MT
6.	Teliamura cold storage	500 MT
7.	Kumarghat cold storage	2000 MT
	Total:	11700 MT

## Rainfall

The state is a high rainfall zone with the incidence of very high concentration of rainfall (up to 450 mm per day) in the monsoon season, which lasts from June to September. The average annual rainfall in the state is 2024.4 mm (50 years average). Maximum rainfall is generally received in the months of July to September. Intermittent rainfall is received round the year, but the pattern of rainfall throughout the year is not homogenous.

The following Table depicts the rainfall in the State.

STATEMENT SHOWING THE ACTUAL AND NORMAL RAINFALL DATA AND RAINY DAY IN TRIPURA FROM THE YEAR 2014 TO 2019																	
Month	Normal		2014			2015			2016			2017			2018		
	Rainfall (In MM)	No. of rainy days	Actual rainfall (In MM)	No. of rainy days	% of departure from Normal Rainfall	Actual rainfall (In MM)	No. of rainy days	% of departure from Normal Rainfall	Actual rainfall (In MM)	No. of rainy days	% of departure from Normal Rainfall	Actual rainfall (In MM)	No. of rainy days	% of departure from Normal Rainfall	Actual rainfall (In MM)	No. of rainy days	% of departure from Normal Rainfall
January	9.6	0.8	0.0	0.0	-100%	0.4	0.0	-96%	1.8	0.2	-81%	0.0	0.0	-100%	3.3	0.3	-66%
February	21.7	1.6	7.8	1.3	-64%	12.2	1.0	-44%	49.8	2.6	129%	16.7	0.7	-23%	8.9	0.6	-59%
March	65.4	3.5	17.9	1.5	-73%	14.7	1.4	-78%	98.8	3.7	51%	185.2	7.8	183%	35.7	2.6	-45%
April	179.1	7.0	67.0	4.8	-63%	318.0	11	78%	184.2	6.4	3%	392.5	11.4	119%	190.6	10.8	6%
May	339.6	12.0	341.8	13	1%	333.6	14.4	-2%	431.0	16.1	27%	225.9	9.8	-33%	601.2	20.5	77%
June	452.0	17.4	445.3	16.3	-1%	281.2	16	-38%	247.8	12.8	-45%	617.6	17.8	37%	519.9	15.4	15%
July	367.5	18.0	255.3	15	-31%	514.7	19.9	40%	330.9	17.0	-10%	442.8	19.3	20%	258.3	12.8	-30%
August	316.7	17.0	338.2	14.8	7%	338.8	13.5	7%	329.5	12.3	4%	516.2	18	63%	222.3	12.9	-30%
September	257.8	13.2	324.7	11.4	26%	296.9	11.9	15%	246.4	10.4	-4%	358.4	15.7	39%	135.1	9.1	-48%
October	165.6	6.9	66.8	4.4	-60%	105.3	5.1	-36%	119.6	7.4	-28%	334.4	10.9	102%	80.1	6.0	-52%
November	33.2	1.5	5.2	0.3	-84%	3.9	0.2	-88%	162.3	3.4	389%	2.2	0.4	-93%	14.8	1.2	-55%
December	5.6	0.3	0.0	0.0	-100%	10.0	0.5	79%	0.6	0.1	-89%	88.5	3.0	1480%	17.6	1.4	214%
<b>TOTAL</b>	<b>2213.4</b>	<b>99.2</b>	<b>1870.1</b>	<b>82.8</b>	<b>-16%</b>	<b>2229.7</b>	<b>94.9</b>	<b>1%</b>	<b>2202.7</b>	<b>92.4</b>	<b>0%</b>	<b>3180.4</b>	<b>114.8</b>	<b>44%</b>	<b>2087.8</b>	<b>93.6</b>	<b>-6%</b>

## **Irrigation**

Agriculture is the main stay of the economy of Tripura. Irrigation is an important input for enhancing the productivity of the agricultural sector. To meet up growing demand of the increased population in the state, the need of irrigation has become obvious. Irrigation sector accordingly got priority in development during ninth plan onwards. The area covered under irrigation till 1972 was only 1956 hectare, which rose to 40383 hectare at the end of March, 1998.

It is estimated that the state has an area under paddy and horticultural crops for 1,78,000 hectare. This quantum of land is immediately visualized for irrigation need. Tripura state in the North Eastern Region of India has a total land area of 10,492 sq.km. The climate condition and the soft soil everywhere in the state is favorable for cultivation of wide range of crops especially the horticultural crops. Amid the undulating terrain, the land under cultivation in the state as per current survey conducted by the State Agriculture Department of the state is 2,55,241 hectare, which is 24.33 percent of the State's total area. The majority of the inhabitants and their agricultural activities are confined to the interspersed plain lands. Although 60 percent of the State population is dependent on it, the primary sector contributes about 25 percent of the State's GSDP. The average land holding in the state is 0.97 hectare and farmers are dominantly small and marginal. One of the principal objectives of the Government of Tripura is to extend assured irrigation to agricultural land. Apart from ensuring coverage of more cultivable land under assured irrigation, the aim is to increase cropping intensity, thereby optimizing the utilization of the limited land resource for improvement of the socio-economic condition of rural masses.

There is no major irrigation project in Tripura. The Gomati, Khowai and Manu are the three medium irrigation projects in the State. The work of the Khowai Medium irrigation project is completed except some residual works. The progress has been made in Gomati and Manu medium irrigation projects inspite of problems of land for construction. The major source of irrigation is Minor irrigation projects like lift irrigation, deep tube wells, diversion schemes, shallow tube wells, 5 HP pumps, water harvesting structures, tanks etc.

The irrigation programmes of the State is being jointly implemented by the Public Works Department (Water Resources), Rural Development Department (RDD), Agriculture Department, Forest Department and the Tripura Tribal Areas Autonomous District Council (TTAADC). Nearly all the minor irrigation projects have been handed over to Gaon Panchayats/ Panchayat Development Committees for better operations, maintenance and upkeep.

The Government is implementing an action plan to expand irrigation coverage up to 1,40,383 hectare in near future.

Tripura is a small State in the North East has a total cultivable land of 2,55,241 ha. and irrigation potential of 1,40,383 ha.