

PLAN FOR MANIPUR

Ref: RC/Eco & Stat/F-/09/, dated 17th Nov. 2009

Letter from A.K. Tripathi Sr. Scientist & Nodal Officer. For preparation of perspective plan for NEH Region

Sl. No.		
1	Cultivated area	Table 1
	Net	21236.46 ha
	Gross	28241.46 ha
2	Farm Holding ((No. & size as per standard classification)	Table 2
3	Irrigated area	Table 3(a)
4	Source of irrigation	Table 3(b)
5	Fertilizer usages	Table 4
6	Organic source of nutrients (Bio fertilizers, vermicompost, FYM availability & use)	Table 5
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8	Livestock including information related to poultry, aquaculture	Table 7
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Table 1. State cultivated area of Manipur (valley)

Land use classification	1990-91	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	Total
Net area sown	146693	154031	153772	154966	154981	155136	155232	155287
Area sown more than once	5765	6235	6752	9813	10387	10478	10555	10575
Total cropped area	152458	160266	160524	164779	165368	165614	165787	165862

Source: Deptt. of Agriculture, Manipur

Table 2. Information about farm holdings in respect of Manipur state (number and size as per the standard classification)

Size of holding	Category of farmer	Area ('000 ha)								
		No. of operational holding ('000)			Area operated ('000 ha)			Average size of operational holding ('000)		
		1990-91	1995-96	2000-01	1990-91	1995-96	2000-01	1990-91	1995-96	2000-01
Below 1.0	Marginal	69.00	69.00	75.00	38.00	39.00	40.00	0.55	0.57	0.53
1.0-2.0	Small	49.00	49.00	49.00	67.00	67.00	63.00	1.37	1.37	1.29
2.0-4.0	Semi medium	21.00	21.00	22.00	54.00	54.00	55.00	2.57	2.57	2.57
4.0-10.0	Medium	3.00	3.00	3.00	15.00	14.00	14.00	5.00	4.67	4.86
10.0 above	Large	Neg.	Neg.	Neg.	1.00	Neg.	Neg.	12.16	-	11.38
All holdings		142.0	142.0	149.0	175.0	174.0	172.0	1.23	1.22	1.15

*Neg.: Negligible

Source: Agricultural Statistics At- A- Glance, 2006. Agricultural census Division. Ministry of Agri., Government of India.

Table 3 irrigated area (net and gross)

(a) Net irrigated area ('000 ha) during 1987-88 to 1999-00 and 1995-96 to hectares

Year	Net irrigated area
	Total
1987-88	1490
1988-89	1480
1989-90	1405
1990-91	1200
1991-92	1500
1992-93	1550
1993-94	1980
1994-95	2400
1995-96	2400
1996-97	2500
1997-98	2000
1998-99	2300
1999-00	2400
1995-96	2400
1996-97	2500
1997-98	2000
1998-99	2300
1999-00	2400
2000-01	1465

Source : Minor Irrigation Department, Manipur and Directorate of Econ. & Statistics, Govt. of Manipur

(b) Gross irrigated area under rice ('000 ha) during 2004-05 to 2007-2008

Year	Gross irrigated area		
	Irrigated	Not irrigated	Others
2004-05	54.21	176.31	54.21
2005-06	43.37	166.26	43.37
2006-07	32.92	165.37	32.50
2007-08	34.26	169.25	34.00

Source: Directorate of Econ. & Statistics, Govt. of Manipur

4. Source of irrigation

Year	hectares		
	Govt. canals	Tube well & other wells	Total
1987-88	1440	50	1490
1988-89	1460	20	1480
1989-90	1305	100	1405
1990-91	1100	100	1200
1991-92	1400	100	1500
1992-93	1450	100	1550
1993-94	1900	80	1980
1994-95	2300	100	2400
1995-96	2300	100	2400
1996-97	2400	100	2500
1997-98	1940	60	2000
1998-99	2200	100	2300
1999-00	2370	30	2400
1995-96	2300	100	2400
1996-97	2400	100	2500
1997-98	1940	60	2000
1998-99	2200	100	2300

1999-00	2370	30	2400
2000-01	1465	-	1465

Source : Minor Irrigation Department, Manipur and Directorate of Econ. & Statistics, Govt. of Manipur

Table 5 Fertilizer usages (if any)
Consumption of Chemical fertilizers in Manipur (in tones)

Sl.No.	Year	Urea	DAP	MOP	SSP	M. Phos.	Total	P.c. to total Consumption
1.	1998-99	7,362	590	105	495	120	8,672	22.81
2.	1999-00	6852	1031	499	530	20	8934	22.55
3.	2000-01	8721	1031	490	-	321	10563	22.60
4.	2001-02	8662	1060	425	229	-	10376	22.32
5.	2002-03	10237	1075	620	748	-	12680	22.36
6.	2003-04	10936	1105	490	200	800	13531	22.91
7.	2004-05	8075	925	285	615	-	9900	22.43
8.	2005-06	5950	505	248	350	-	7053	23.06
9.	2006-07	6600	1310	435	820	-	9165	22.52
10	2007-08	6000	1278	570	650	6	8504	21.15

Source: Department of Agriculture, Manipur

Table 6. Organic sources of nutrients including bio-fertilizers vermicompost, FYM availability and use etc.
(MT/annum)

Sl.No.	Nutrients	Unit	Capacity	Production
1.	Biofertilizer	l	150	Nil
2.	Vermiculture	20	750	Nil

Source: Department of Agriculture, Manipur

Table 7.(a) Production productivity and Area, of crops Horticultural crops of Manipur

Sl	Name of Crops	2000-2001			2001-2002			2002-2003			2003-2004			2004-2005		
		Area	Prod	Prdty	Area	Prod	Prdty	Area	Prod	Prdty	Area	Prod	Prdt	Area	Prod	Prdt
Fruit crops																
1.	Pine apple	10020	69145	6.9	9080	62282	6.8	11872	95427	8.0	10652	79889	7.5	11872	95427	8.0
2.	Banana	1650	13009	7.8	1660	12690	7.6	2014	16893	8.3	1950	15308	7.8	2014	16893	8.3
3.	Papaya	1875	10313	5.5	1875	10044	8.3	1995	11594	5.8	1945	21282	10.9	1995	11594	5.8
4.	Orange	930	3700	3.9	200	990	4.9	1693	7787	4.6	1243	5097	4.1	196	997	5.0
5.	Mango	190	955	5.0	635	3890	6.1	196	997	5.0	196	997.26	5.0	598	3824	6.3
6.	Peach/Pear /Plum	635	4110	6.4	730	2600	3.5	598	3824	6.3	598	3737.5	6.2	732	2298	3.1
7.	Guava	725	2465	3.4	350	1742	4.9	732	2298	3.1	732	2298	3.1	325	1633	5.0
8.	Lime/Lemon	1130	5141	4.5	1130	5260	4.6	1337	6389	4.7	1227	7890	6.4	1337	6389	4.7
9.	Jack fruit	290	1160	4.0	935	3145	3.3	325	1633	5.0	325	3137	9.6	1693	7787	4.6
10.	Passion fruit	-	-	-	-	-	-	3035	33666	11.0	1425	15747	11.0	3035	33666	11.0
11.	Other fruit	7300	8674	1.1	7742	36552	4.7	6915	12723	1.8	6715	12355	1.8	6915	12723	1.8
Total		24745	118672	4.7	24337	102698	4.2	30712	193231	6.2	27008	167737	6.2	30712	193231	6.2
Vegetables																
12.	Cauliflower	1010	10100	10.0	975	8274	8.4	1340	4049	3.0	1123	9658	8.6	1197	10458	8.7
13.	Cabbage	1320	15840	12.0	1260	15266	12.0				1724	21033	12.2	2020	26032	12.8
14.	Tomato	505	4121	8.1	500	3900	7.8	20	172	8.6	579	4632	8.0	634	5381	8.4
15.	Pea	1010	5810	5.7	990	5528	5.5	115	1380	12.0	1281	7686	6.0	1313	8102	6.1
16.	Radish	230	2300	10.0	240	2341	9.7	11	100	9.0	198	1762	8.8	209	1863	8.9
17.	Carrot	280	2038	7.2	280	2058	7.3	84	490	5.8	263	1973	7.5	284	2129	7.4
18.	Frence bean	610	1861	3.0	600	1673	2.7	-	-	-	712	1994	2.8	768	2199	2.8
19.	Bindhi	710	2343	3.3	710	2346	3.3	-	-	-	824	2802	3.4	893	3038	3.4

20.	Brinjal	315	1629	5.1	305	1511	4.9	-	-	-	315	1487	4.7	345	1623	4.7
21.	Khol-Khol	290	1490	5.1	245	1339	5.4	-	-	-	235	108	0.4	242	1111	4.5
22.	Other Vegetable	315	882	2.8	155	596	3.8	-	-	-	51	273	5.3	53	285	5.3
Total		6595	48431	7.3	6260	44832	7.1	7305	40119	5.4	8026	65438	8.1	68	488	7.1
Spices																
23.	Chillies	7010	22783	3.2	7020	23980	3.4	7324	29296	4.0	200	802	4.0	7374	29496	3.4
24.	Onion	1100	11000	10.0	515	4820	9.3	695	5908	8.5	40	305	7.6	695	5908	8.5
25.	Ginger	530	5300	10.0	1110	10930	9.8	1265	12524	9.9	60	465	7.7	1625	16088	9.9
26.	Turmeric	320	3780	11.8	310	3363	10.8	372	4092	11.0	25	192	7.6	372	4092	11.0
27.	Total:-	8960	42863	4.7	8955	43093	4.8	9656	51820	5.3	325	1764	5.4	10066	55584	5.5

Source: Directorate of Horticulture & soil Conservation Manipur

Sl	Name of Crops	2008-2009		
		Area	Prod	Prdty
28.	Pre kharif paddy	15.99	40.77	2.55
29.	Main kharif paddy	16.18	39.93	2.47
30.	HYV	90.00	3.55.49	3.95
31.	Jhum	78.82	58.99	0.75
32.	Terrace	10.00	23.07	2.31
33.	Total main paddy	195.00	4.77.48	2.45
34.	Total paddy	210.99	518.25	2.46
35.	Kharif maize	17.98	32.25	1.79
36.	Rabi maize	2.25	3.13	1.39
37.	Total maize	20.23	35.38	1.75
38.	Wheat	2.05	5.12	2.50
39.	Pulse kharif	4.70	5.15	1.10
40.	Pulses rabi	21.30	17.60	0.83
41.	Total pulses	26.00	22.75	0.88
42.	Oilseed kharif	8.20	6.15	0.75
43.	Oilseed rabi	26.00	20.00	0.77
44.	Total oilseed	34.20	26.15	0.76
45.	Sugarcane	5.15	298.00	57.86
46.	Potato	13.00	108.00	8.31

Source: Directorate of Agriculture, Manipur

Table 8. (a) Livestock including information related to poultry aquaculture

Sl.No	Item	Manipur
1.	Cattle	4,18,028
	(a) Males over 3 years	1,50,256
	(b) Females over 3 years	1,27,187
	(c) Young Stock	1,40,585
2.	Buffloes	76,950
	a) Males over 3 years	20,440
	(b) Females over 3 years	28,035
	(c) Young Stock	28,475
3.	Sheep	6,478
4.	Goat	33,478
5.	Horses and Ponies	1,893
6.	Pigs	4,14,527
7.	Mithun	19,737
8.	Dog	1,31,249

9.	Other Livestock	1,023
10.	Total Livestock	11,03,363
11.	Poultry	29,40,674

Sources: Directorate of Veterinary and Animal Husbandry Services, Manipur

(b) Production of Egg, Meat and Milk in Manipur during 2000-01, 2001-02, 2002-03, 2003-04, 2004-05 & 2005-06

Sl.	Item	Unit	2000-01	2001-02,	2002-03	2003-04	2004-05	2005-06
1	Egg	Lakh	723.29	743.29	762.34	792.75	822.32	833.66
2	Beef	Tones	6236.00	6,219.10	6,410.00	6,469.00	5,539.00	6,592.00
3	Buffalo Meat	Tones	3076.00	2,955.68	3,100.00	3,177.00	3,298.00	3,374.00
4	Sheep Meat	Tones	90.00	77.98	85.00	89.00	92.00	92.00
5	Mutton	Tones	277.00	264.78	240.00	524.00	266.00	264.00
6	Pork	Tones	6560.00	6,844.14	6,980.00	7,042.00	7,205.00	7,246.00
7	Total Meat(2to7)	Tones	16,239.00	16,361.68	16,815.00	17,301.00	16,400.00	17,568.00
8	Milk	Tones	68,130.00	70,820.00	71,310.00	72,920.00	74,770.00	76,760.00

Sources: Directorate of Veterinary and Animal Husbandry Services, Manipur

Table 9. Weather information(long term average and decadal year wise)

Recorded at Station of Lamphelpat, Imphal Latitude: 24° 45' N Altitude: 744 msl Longitude: 93°54' E

Temperature (°C)

Max. Temp. (°C)

Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average (till 2009)
Jan	21.7	24.3	21.2	23.0	21.3	23.0	21.9	20.2	21.8	21.7	20.1	22.8	23.3	21.9
Feb	23.5	29.1	22.5	25.3	26.1	25.4	25.1	23.4	24.7	20.8	21.2	25.2	23.7	24.4
Mar	24.1	29.7	24.7	27.5	28.1	27.4	28.9	24.7	27.2	25.1	24.9	26.6		26.6
April	28.0	31.9	28.9	29.7	28.5	29.1	25	27.5	29.2	22.6	28.8	28.2		28.1
May	29.9	29.2	28.5	29.3	28.5	29.0	27.6	27.0	29.4	28.3	29.0	29.9		28.8
June	29.6	29.9	29.3	29.0	30.3	28.5	28.2	29.7	29.8	28.7	28.6	29.9		29.3
July	29.2	29.2	29.9	29.7	29.6	29.7	27.1	28.1	29.6	28.1	28.1	29.8		29.0
Aug	29.7	29.1	29.9	30.8	29.6	31.0	28.5	28.7	30.2	28.8	28.5	28.7		29.5
Sept	30.9	30.0	28.7	29.4	28.9	30.2	26.8	28.7	29.6	27.8	29.4	29.3		29.1
Oct	30.4	28.1	28.2	28.6	28.9	29.0	26.3	27.2	28.1	26.9	27.6	28.6		28.2
Nov	27.6	26.7	25.5	25.1	25.9	26.3	24.6	24.7	24.2	24.1	25.4	25.4		25.5
Dec	24.8	23.0	23.1	23.3	22.9	23	21.3	21.5	22.0	21.1	20.7	22.2		22.4

Min. Temp. (°C)

Months	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average (till 2009)
Jan	5.9	4.4	4.3	3.5	6	4.5	5.2	5.6	5.1	3.6	6.1	5.9	4.3	5.0
Feb	7.2	8.1	7.0	7.8	7.7	8.3	6.7	10.5	10	9.7	7.1	6.2	6.5	8.0
Mar	11.8	13.1	11.9	11.3	11.6	11.9	13.6	13.9	11.3	10.7	12.5	13.1		12.2
April	16.3	17.8	17.2	15.4	15.3	15.9	16.2	15.5	16.4	14.3	15.6	15.2		15.9
May	19.9	19.9	19.5	19	17.8	18.8	19.8	17.5	18.9	19.9	19.3	19.3		19.1
June	21.2	21.9	21.3	21.2	21.9	21.2	21.7	21.3	22.2	21.9	21.3	21.3		21.5
July	22.5	22.3	22.2	22.7	21.8	22.3	21.8	22	22.9	22.2	22.2	22.6		22.3
Aug	22.4	21.9	21.9	22.0	21.8	22.4	22.1	22.5	22.4	22.3	22.5	22.1		22.2
Sept	20.8	21.2	20.8	21.1	20.7	21.5	20.8	20.8	21.3	20.9	21.3	21.5		21.1

Oct	17.9	19.1	18.3	18.8	18.3	19.4	16.8	19.1	17.8	18.3	18.2	18.6		18.4
Nov	13.0	12	11.1	13.4	11.6	10.2	10.8	11.6	12.3	14.6	9.9	11.7		11.9
Dec	6.5	6.5	4.2	5.9	6.9	7.8	7.2	7.7	6.2	6.6	7.2	5.6		6.5

Rainfall (mm)

Months	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean
	1998		1999		2000		2001		2002		2003	
Jan	29.9	1.0	1.0	0.0	27.0	0.9	2.2	0.1	35.3	1.1	1.5	0.1
Feb	41.4	1.5	0.0	0.0	13.6	0.5	98.0	3.5	1.5	0.1	13.3	0.5
Mar	117.4	3.8	51.2	1.7	169.4	5.5	66.0	2.1	14.4	0.5	32.0	1.0
April	73.7	2.5	2.0	0.1	202.0	6.7	89.5	3.0	92.7	3.1	118.9	4.0
May	188.4	6.1	307.8	9.9	405.3	13.1	138.8	4.5	256.8	8.3	159.7	5.2
June	451.3	15.0	257.9	8.6	302.0	10.1	430.9	14.4	163.5	5.5	284.6	9.5
July	223.0	7.2	167.7	5.4	155.3	5.0	138.8	4.5	140.1	4.5	370.4	12.0
Aug	220.5	7.1	270.5	8.7	137.2	4.6	99.3	3.2	490.7	18.9	193.6	6.3
Sept	130.6	4.4	111.6	3.7	251.4	8.4	100.2	3.3	98.8	3.3	130.6	4.4
Oct	43.3	1.4	235.5	7.6	169.8	5.5	152.0	4.9	172.0	5.6	121.5	3.9
Nov	52.3	1.7	6.5	0.2	21.7	0.7	155.4	5.2	10.4	0.4	4.1	0.1
Dec	0.0	0.0	25.2	0.8	0.0	0.0	0.0	0.0	30.1	1.0	74.8	2.6
Total	1571.8		1437.2		1854.7		1471.1		1506.3		1505	

Contd

	2004		2005		2006		2007		2008		2009	
Months	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean	Total	Mean
Jan	4.8	0.20	0.00	0	0	0	29	0.9	34.2	1.1	0	0
Feb	0	0.0	99.2	3.5	49.1	1.8	151.8	5.4	21	0.7	20.8	0.7
Mar	24.9	0.80	183.4	5.9	5.2	0.2	17.6	0.6	69.6	2.2	50.9	1.6
April	281.2	9.4	76.2	2.5	41.7	1.4	136.8	4.6	17.8	0.6	78.8	2.6
May	191	6.20	139.2	4.5	227.2	7.3	233.4	7.5	94.6	3.1	156.4	5.0
June	195	6.5	176.6	6.5	175.9	5.9	201	6.7	260.2	8.7	69.3	2.3
July	336.8	10.90	193.2	6.2	158.4	5.1	218.6	7.1	210.2	6.8	181.1	5.8
Aug	270.4	8.7	191	6.2	90.4	2.9	112.2	3.6	244.5	7.9	303.5	9.8
Sept	295.2	9.80	196.6	6.6	129.8	4.3	191	6.4	150.8	5	131.2	4.4
Oct	270	9.0	111.2	3.6	114	3.7	178	5.7	87.6	2.8	166	5.4
Nov	24.2	0.80	NA	NA	25.6	0.9	52.6	1.8	1.7	0.1	15.6	0.5
Dec	11.6	0.4	NA	NA	16	0.5	0	0	0	0	0	0
Total	1905.1		1366.6		1033.3		1522.0		1192.2		1172.0	

Average mean or normal rainfall (mm) = 1592.4 mm (1998-2009)

Relative Humidity

Morning Relative Humidity (%)

Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Average (till 2009)
Jan	64.5	69.7	73.1	66	82.3	70.5	82	97	96.2	98.7	97.4	78	78.2	81.3
Feb	96	58.4	66.1	70.3	63.0	65.3	65.8	84.4	95.8	93.4	96	72	73.0	77.2
Mar	73.6	57.8	75.0	63.1	58.6	62.4	66.7	88.5	78.2	79.5	89.5	70.9		72.0
April	72.8	56.8	68.5	61.8	73.6	68.9	85.8	78	76.0	77.9	74.2	85.6		73.3
May	72.6	75.7	80.4	72.7	80.0	76.0	84.2	87	81.8	84.1	81.8	89.6		80.5
June	86.5	77.6	82.8	84.3	77.8	85.3	87.2	85	86.6	90.6	89.8	88.7		85.2
July	83.9	85.2	84.0	82.7	82.4	82.7	91.8	89	88.2	92.2	92	91.3		87.1
Aug	83.8	85.3	84.6	81.3	84.2	80.9	90.1	91	87.1	92.3	88.7	91.8		86.8
Sept	78.8	83.1	87.3	80.1	77.5	84.1	94.0	91	88.6	90.4	90.9	91.7		86.5
Oct	75.6	87.5	84.7	84.1	80.8	86.4	93.2	95	87.6	95.1	90.6	89.9		87.5
Nov	81.3	83.3	89.1	88.9	78.9	84.0	95.1	94	97.0	83.6	85	86.7		87.2

Dec	78.4	79.8	81.0	90.4	85.4	79.0	97.7	98	98.8	98.5	85	82.2		87.9
Mean	79.0	75	79.7	77.1	77.0	77.1	86.1	89.8	88.5	89.7	88.4	84.8		82.70

Afternoon Relative Humidity (%)

Month	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	<i>Average (till 2009)</i>
Jan	59.5	57.4	62.0	51	65.8	57.4	68.8	44	40.3	36.5	51.3	73.5	77.9	55.6
Feb	50.5	41.0	54.4	53.7	47.8	50.0	54.3	41.8	42.1	50.6	45.9	66.2	72.0	49.9
Mar	53.3	49.7	67.1	48.5	48.0	51.8	58.2	53.8	33	37.5	50.8	42.4		49.5
April	63.3	49.1	59.8	50.1	66.4	65.0	71.9	50	51.4	63.5	43.6	79.4		59.5
May	66.2	76.2	76.3	70.3	73.0	73.1	62.5	62	63.9	64.9	57.6	78.3		68.7
June	78.0	78.9	81.5	78.0	76.5	82.5	68	66	71.1	72.6	70.7	84.3		75.7
July	83.4	80.7	79.3	76.4	74.5	79.6	76.6	72	74.4	77.2	75.9	84.4		77.9
Aug	84.5	82.7	80.9	78.6	83.2	79.4	70.9	73	69.9	73.0	77.3	82.3		78.0
Sept	77.4	83.3	80.2	77.5	79.3	82.2	76.8	68	72.6	69.0	78.3	81.8		77.2
Oct	74.8	83.7	78.8	79.8	79.6	81.8	64.6	67	62.2	67.9	86.3	82.74		75.8
Nov	75.9	75.5	71.9	79.7	79.7	73.6	49.1	51	51.4	64.5	82.5	80.9		69.8
Dec	63.5	69.3	67.2	73.8	76.1	76.2	49.5	54	43.6	51.4	79.4	74.2		64.9
Mean	69.2	69.0	71.6	68.1	70.8	71.0	64.3	58.6	56.3	60.7	66.6	75.8		66.87

Source: Experimental Agromet Advisory Service, Lamphelpat, Manipur