

Table 1: Nutrient Balances, India, Tamil Nadu and three villages

<b>ALL INDIA</b>	<b>N</b>	<b>P</b>	<b>K</b>
Desirable Ratio	4.0	2.0	1.0
Desirable Ratio for rice	2.0	1.0	1.0
1955-6	10.8	1.3	1.0
Actual Ratios pre-reform (1990-1)	6.0	2.4	1.0
Reform Period			
1991-2	5.9	2.4	1.0
1992-3	9.5	3.2	1.0
1993-4	9.6	2.9	1.0
1994-5	9.0	2.8	1.0
<b>TAMIL NADU</b>			
Pre-reform 1990-1	1.7	0.63	1.0

Pre-reform 1997	3.0	1.0	1.0
<b>OLD NORTH ARCOT DT</b>			
Recommended Ratio	2.5	1.05	1.0
Pre-reform 1990-1	2.2	1.0	1.0
Reform period			
1991-2	2.8	0.9	1.0
1992-3	2.9	1.0	1.0
1993-4	2.5	1.0	1.0
3 villages, TVM Dt (reform period 1993-4)			
chemical fertiliser	1.74	1.28	1.0
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all fertiliser	1.22	0.81	1.0
chemical fertiliser - paddy	1.90	1.32	1.0
all fertiliser - paddy	1.40	0.87	1.0

Sources: Economic Survey, 1994-5; Govt. of Tamil Nadu, Dept of Stats; Govt. of Tamil Nadu, Dept. of Agriculture, raw data field survey.

Table 2: Value Rs. of natural manure, commercial fertilizer and pesticides.

		Manure		Fertiliser		Pesticides	
	N	Average value	Average Rs / ha	Average value	Average Rs / ha	Average value	Average Rs / ha
<b>By village</b>							
Veerasambanur	31	114.6	441.5 (3129.8)	676.6	1630.1 (326.6)	79.8	191.4
Vinayagapuram	84	183.2	496.6 (4453.6)	337.9	903.9 (190.0)	72.8	238.4
Nesal	70	178.3	223.9 (4168.7)	1169.9	1666.6 (424.7)	232.2	327.4
<b>By season</b>							
Season 1	80	169.3	367.1	611.8	1010.3	116.9	201.4
Season 2	54	181.5	435.1	735.3	1437.9	110.9	260.6
Season 3	51	154.3	464.5	509.1	1389.1	122.8	327.6
<b>By cluster</b>							
Poor	51	97.3	434.9	322.9	1016.6	43.9	200.9
Middle	79	158.7	386.7	541.3	1225.1	85.4	207.5

Elite	55	286.5	439.9	1186.2	1581.2	275.8	415.3
<b>By landtype</b>							
Nanjai	77	227.3	483.3	959.4	1729.4	170.5	320.5
Punjai w w	75	130.1	331.0	552.6	1207.5	113.1	284.8
Rainfed	33	131.0	456.7	27.5	84.2	5.9	31.2
<b>By crop</b>							
Paddy	107	178.9	490.5	801.8	1753.8	161.3	388.5
Groundnut	60	177.6	332.7	214.7	252.7	54.7	52.1
Sugarcane	7	91.3	117.3	1612.5	2390.2	33.0	55.0
Banana	2	0	0	2685.0	3310.7	0	0
Ragi	4	54.3	400.1	24.7	151.8	0	0
Cholam/GGram	1	100.0	125.1	0	0	300.0	375.0
Jowar	1	0	0	0	0	0	0
R.Gram	1	0	0	0	0	0	0
Casurina	2	0	0	0	0	0	0
<b>TOTAL</b>	<b>185</b>	<b>169.0</b>	<b>413.9</b>	<b>622.2</b>	<b>1242.5</b>	<b>116.7</b>	<b>253.7</b>

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Note: values are averages for all agricultural producers.

Table 3: Nutrients in paddy cultivation 1993-4

(Av. kgs/acre cultivated)

	Chemical			Organic			Total		
	N	P	K	N	P	K	N	P	K
Poor Peasants	31.08	24.00	18.62	23.04	13.43	26.87	54.04	37.10	45.09
Middle Peasants	30.74	21.96	18.26	21.65	12.75	25.37	52.24	34.66	43.48
Elite	32.94	23.45	28.43	21.36	12.51	25.21	54.30	36.33	53.70
Samba (1)	30.41	21.37	18.87	19.54	11.36	22.74	49.77	33.09	41.64
Navarai (2)	33.72	21.52	20.10	22.24	13.04	26.37	55.98	34.45	46.33
Sarnavari (3)	30.01	25.85	23.49	24.19	14.29	28.22	54.06	39.77	51.28
									8
Nanjai	37.42	26.51	23.43	22.82	13.35	26.69	60.14	40.03	50.07
Punjai w w	26.03	19.83	18.79	20.70	12.18	25.26	46.63	31.74	42.78
Rainfed	12.00	9.33	6.67	30.00	17.33	36.67	42.00	27.33	42.67
	9.33								

Nesal	36.70	26.16	25.06	19.52	11.54	22.87	54.15	37.63	47.79
	0								
Vinayapuram	26.31	19.51	17.91	26.11	15.30	30.78	52.34	34.78	48.46
			51						
Veerasambanur	42.09	28.33	22.87	12.80	7.40	14.47	54.69	35.75	37.33
<b>ALL VILLAGES</b>	<b>31.37</b>	<b>22.91</b>	<b>20.82</b>	<b>21.98</b>	<b>12.89</b>	<b>25.77</b>	<b>53.26</b>	<b>35.77</b>	<b>46.41</b>
	4			2.6		3.2			1

N = Nitrogen

P = Phosphorus

K = Potassium

Source: Village data 1993-4.

Table 4: Paddy Production, by Agrarian Class, 1973-4, (Rs/Acre)

	Traditional varieties		Total	High Yielding Varieties		Total
	F + AC	manure		F + AC	manure	
Capitalist farmers	112	22	134	244	11	255
Small capitalists	79	23	102	130	49	179
Marginal peasants	33	20	53	115	83	198

Source: J.C. Harriss, 1982 Table 5.3 p. 155.

Key: F + AC: Fertiliser and Agrochemicals

Table 5: Agrochemical uses 1973-4 to 1993-94

HYV Paddy, Rs/ha, constant prices

	1972-3	1973-4	1981-2	1982-3	1993-4
Fertiliser	242	184	463	384	437
Pesticides	14	12	33	7	98.5

Sources: 1972-4, 1993-4 field survey

1981-3; Cost of cultivation of Principal Crops data, TNAU

Note: deflator is CPIAL (see chapter 1-1).