

Food Grain Production in the North-Eastern Region since Independence

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Introduction

In spite of immense agriculture potential that exists in the North-Eastern Region, there are several limitations which have adversely affected agriculture production. Shifting cultivation, negligible use of fertilizer, non-adaptation of modern agronomic practices, cultivation of root crops on hill slopes, limited use of high yielding varieties, absence of modern seed fertilizer technology are some of the causes of low productivity.

In the recent decades the magnitude of the problem has been considerably increased due to increase in population pressure : excessive felling of trees for timber, fire-wood and other industrial uses, non-adoption of conservation measures is causing massive degradation of environment. Environmental degradation is primarily the result of human misuse of the natural resources.(5)

The economy of the North-Eastern Region is dominated by agriculture where more than 70 per cent of the population is engaged in agriculture and allied sector. Agriculture in the North-Eastern Region is characterised by traditional pattern, due to difficult terrain and topography the use of agriculture implements is limited to hoes and daos. The improved agriculture practices are adopted by a limited section of the farmers. Another unique feature of the region is that the level of literacy is high, some of the units claiming nearly the highest levels in the country. In relation to literacy and rich natural resources there are some important features of the region :

1. Traditional economy is based on Shifting Cultivation. At that time natural resources were abundant, pressure of population on natural resources was also low, environmental degradation was not known, and the economic needs were limited. The situation now has changed. There is a growing pressure on the limited natural resources, however, natural resources are still abundant but food grain production has not fallen in line with population increase.

2. In the region where level of literacy is much higher than the national average (except Arunachal Pradesh) the region has shortage of technically trained man power ; here one needs to distinguish between literacy and education.

Production Requirement and Procurement

It has been said that famine lies broadly written across the pages of Indian history. Mention of famine has been made in the ancient Vedic literature. In the medieval times and later during Mughal rules instances of famine have been reported under the British rule there are more accurate record of famine. The positive part of the famine is that famine has led to the formation of *food policy in India*, setting up of irrigation commission and *agriculture commission*.⁵

From the available records, scarcity of food in the North-Eastern Region is not known.(2, 3). Almost 70 per cent of the land is hilly the remaining 30 per cent falls partly in Assam and partly in Tripura. A vast majority of the hilly areas are inhabited by tribals communities. The intimate dependence of tribal community on forests for food, fibre and shelter and their traditional consumption of meat and meat products are obvious reasons for non-existence of famine in the North-Eastern Region. There may not have been famine in the region, however, the region has been deficit in food production and dependents on food supply from other parts of the country. (Table - 1)

Prior to Independence Tripura and Manipur have been self-sufficient in food grain production and could meet the demand of its small population.⁴ Leaving aside some odd years since 1952-53 there is steady rise in foodgrain production in almost all the North-Eastern states. The region as a whole was self-sufficient in foodgrain production during the early 50s. Since 1954-55 though some of the states have shown self-sufficiency in foodgrain production the region as a whole is deficient in foodgrain production correlating food production and population. Prior to 1951 there is gradual increase in population. The increase has not put pressure on food grain. After 1951 food grain production has not fallen in line with population increase. (Chart -1 and 2).

Cropping Intensity

The number of times crop(s) cultivated during a year on a particular piece of land is called Cropping Intensity . It does not

mean productivity of a particular land. However, it does indicate the effective utilisation of land. From Table - 2 it is evident that productivity can be increased. In a span of 15 years (1972-73 to 1986-87) the region has shown approximately 21 per cent increase in food grain production ranging from 8 per cent in Assam to 259 per cent in Arunachal Pradesh. (Table - 3)

Operational Holdings

Average size of operational holdings since 1953-54 has been gradually decreasing. In a span of 26 years (1961-1986) net sown area has increased by 45 per cent, however, from 1981 to 1987 net sown area has not increased substantially (Less than 1 per cent) indicating that pressure of population on land and socio-economic factors are aggravating and accelerating the problem of food grain production. The prevailing land tenure system in the North-Eastern Region has a significant bearing in promoting the effective utilisation of land. 1

Conclusion

There is limited scope of increasing the area under cultivation. In a span of 7 years (1981 to 1987) only 36 thousand hectares of additional land has been put under cultivation. This addition has been made in only by two states (Nagaland 30 thousand hectares and Arunachal Pradesh 6 thousand hectares). About 74 per cent of the area is under food grain crop. Use of additional land for cultivation of food grain may not be possible. Food grain production will have to come from increased crop yields. Increase yields will depend upon inputs like improved seed, fertilizer and pesticides. Extension services, which provide education and training for an sound agriculture system currently inadequate or non-existent needs to be accelerated. The traditional practice of shifting cultivation needs to be improved ; when the population densities were low and land plentiful it was ecologically sound. Population pressure have reduced the cycle of cultivation from 30 years to 4 to 6 years. Out of necessity and due to mounting pressure of population agriculture production will have to be increased through increased yields. Sound agricultural practices are essential for food security.

TABLE - 1 Procurement of Foodgrain from Central Pool by North Eastern States

(in 000 tonnes)

	1965	1966	1967	1968	1969	1970	1971	1972	1973
Assam	146	193	145	213	130	217	243	266	148
Arunachal Pradesh	16	15	19	16	9	5	5	5	9
Manipur	-8	10	-8	12	-6	-1	2	8	23
Meghalaya	..	..	-	..	..	..	29	37	43
Mizoram	..	..	..	..	..	..	..	13	20
Nagaland	a	a	a	19	16	13	12	22	18
Tripura	41	26	35	55	32	18	92	14	57
Total (N. E).	211	244	207	315	193	252	383	325	318

a = below 500 tonnes

Source : Statistical panorama, Food Corporation of India.

- = Included with Assam

TABLE 1 Contd.

	1974	1975	1976	1977	1978	1979	1980	1981	1982
Assam	146	197	183	326	454	528	466	473	467
Arunachal Pradesh	14	17	15	18	20	22	18	28	34
Manipur	15	9	7	11	9	19	23	28	40
Meghalaya	70	61	64	64	72	83	65	80	93
Mizoram	23	22	25	31	41	31	31	38	59
Nagaland	21	31	24	30	38	66	41	49	59
Tripura	19	45	28	22	42	86	87	58	111
Total (N. E.)	308	382	346	502	676	835	731	754	863

Source : Statistical Panorama, FCI, New Delhi.

TABLE 2

Share of Area under Foodgrain to Gross Cropped area and Cropping Intensity

1980-81

	Gross Crop- ped area	Area under foodgrain crop	Share of Area under food grain to total cropped area	Cropping intensity
	A	B	C	D
Assam	3466	2521	73.2	129.8
Arunachal Pradesh	141	118	82.8	125.9
Manipur	219	205	93.6	156.4
Meghalaya	223	124	55.7	115.5
Mizoram	106	37	34.4	137.7
Nagaland	158	123	78.8	106.8
Tripura	375	296	79.5	152.4
North East	4688	3423	70.0	130.0
All India	173324	125790	72.6	123.6

Fertilizer statistic 1984-85, 1985-85

1982-83

Assam	3556	2562	72	131.9
Arunachal Pradesh	162	141	87	137.3
Manipur	188	168	89	134.3
Meghalaya	208	135	65	107.8
Mizoram	78	66	85	120.8
Nagaland	178	132	74	109.9
Tripura	381	304	80	154.9
North East	4751	3508	84	128.4
All India	172636	125095	73	121.8

Fertilizer statistic 1984-85 : 1985-85.

TABLE - 2 Contd.

Share of Area under Foodgrain to gross Cropped area and Cropping Intensity

1987-88

	Gross cropped area	Area under foodgrain crop	Share of area under foodgrain to total cropped area	Cropping intensity
	A	B	C	D
Assam	3718	2727	73	137.9
Arunachal Pradesh	191	162	85	161.8
Manipur	186	170	91	132.8
Meghalaya	216	139	64	111.9
Mizoram	191	56	93	104.3
Nagaland	165	148	90	100.0
Tripura	354	288	81	143.9
North-East	5021	3690	73	127.5
All India				

Fertilizer statistic 1984-85 ; 1985-85.

TABLE - 3
Food-Grain Production and requirement in relation to Total Population (1960 - 1987)

Assam	1960-61	1972-73	1980-81	1983-84	1986-87	% increase in production from 1972-73
Production	1789	2396	2706	2727	2588	8.0
population	11986	15200	19903	20700	23800	
Requirement	1824	2490	2451	2588	4126	
Surplus/Deficit	-35	-100	-745	-861	-1538	
Arunachal Pradesh						
Production		52	131	157	187	259.6
Population		402	628	700	700	
Requirement		65	108	121	121	
Surplus/Deficit		-7	+23	+35	+66	
Manipur						
Production	129	174	292	267	259	48.8
Population	790	1100	1411	1600	1700	

Requirement	121	180	244	277	293
Surplus/Deficit	+8	-6	+48	-7	-34
Meghalaya					9.1
Production	a	120	155	163	131
Population		1000	1328	1400	1500
Requirement		164	230	242	260
Surplus/Deficit		-44	-75	-79	-129
Mizoram					86.2
Production	a	29	34	43	54
Population		300	488	540	500
Requirement		54	84	93	86
Surplus/Deficit		-23	-50	-50	-32
Nagaland					72.2
Production	63	54	105	145	93
Population	369	500	773	800	900
Requirement	55	82	134	251	156
Surplus/Deficit	+8	-28	-29	-106	-63

Tripura								
Production	186	403	408	390				
Population	1153	2043	2300	2500				
Requirement	176	354	707	433				
Surplus/Deficit	-19	+49	-299	-43				
North-Eastern Region								
Production	2141	3826	3909	3702				21.1
Population	14163	26619	28300	31600				
Requirement	2373	4615	4906	5478				
Surplus/Deficit	-233	-789	-997	-1776				
India								
Production	82018	129867	152543	143420				
Population	439235	683810	709800	747800				
Requirement	72144	118504	123061	129369				
Surplus/Deficit	+9874	+11363	+29482	+14051				

a = included in Assam

Prododuction, requirement and surpluses deficit in 000 tonnes
Population in thousands

Requirement made on the basis of Ministry of Agriculture's yard stick 450 gm (upto 1975) and 475 gm (after 1975) per person per day.

TABLE - 4

Land Under Agriculture Use

(in 000 hectares)

	Geographical area			Net sown area			Area sown more than once			Total cropped area				
	1976	1981	1986	1961	1971	1981	1961	1971	1981	1961	1971	1981	1986	
Assam	7852	7844	7852	2205	2235	2696	2696	400	599	744	1022	2605	2834	3439
Arunachal														
Pradesh	8358	8374	5486	..	115	112	118	..	15	40	73	..	48	152
Manipur	2236	2233	2211	90	140	140	140	1	7	100	46	91	147	240
Meghalaya	2249	2243	2249	..	162	93	193	..	31	10	23	..	193	203
Mizoram	2109	2108	2108	..	47	65	65	..	1	3	..	..	48	68
Nagaland	1653	1658	1122	..	61	153	183	..	1	11	8	..	63	164
Tripura	1048	1049	1048	207	240	246	246	40	115	134	108	247	355	380
North East	25505	25509	22078	2502	3000	3605	3641	441	769	1041	1208	2943	3769	4646
All India	328726				142002				35039				177041	

Source : Census of India

TABLE - 5

State	Average size of Operational Holding				
	1953-54	1970-71	1976-77	1980-81	1985-86
Assam	2.14	1.46	1.37	1.36	
Arunachal Pradesh	a	6.19	5.95	4.2	
Manipur	1.13	1.15	1.11	1.24	
Meghalaya	a	1.65	1.74	1.74	
Mizoram	a	n	1.50	1.50	
Nagaland	a	5.40	7.63	7.14	7.5
Tripura	153	1.01	1.25	1.10	1.10
All India			2.00	1.82	1.75

a = included on Assam

n = not available

Source : Agriculture Situation in India.

Notes & References

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