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THE GROWTH OF FOOD PRODUCTION IN ASSAM*

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Introduction

During the decade 1951-61, Assam recorded the highest rate of growth in population of all the States of Indian Union. Against an all-India growth of 21.5 per cent, Assam had a growth rate of 34.45 per cent. Without going into the causes of such an abnormal growth,[1] it should be admitted that this pressure of population on the land and other resources of the State had adversely affected her economy. This retarded growth has been reflected more in the agricultural production, particularly, the production of food than in other sectors. During 1952-53 to 1964-65, agricultural production of Assam rose only by 1.25 per cent linear rate against 5.56 per cent in the Punjab and 5.12 per cent in Gujarat. Whatever growth in agricultural production was attained came not through the rise in productivity, but through the extension of cultivation, as during the same period the overall agricultural productivity fell at the linear rate of 0.07 per cent.[2]

The above picture was of course painted with the analysis of the aggregate data of the State of Assam comprising both hills and plains. Assam comprises of seven districts in the plains and four in the hills, the latter occupying 48 per cent of the State area with about 11 per cent of the State population. But the available statistics of the hill districts on the area and production of crops are based on guess-work and eye-appraisal. It is so because of the wide prevalence of shifting cultivation known locally as *Jhum* which is a system of mixed cropping.[3] So, the aggregate data for all-Assam are not reliable to the extent those incorporate data for the hills. In contrast, the data on the area and production of rice and foodgrains in the plain districts of Assam are derived from area reports of cadastrally surveyed land records and regular sample crop cutting surveys. This paper attempts to calculate the growth of area under and production of rice and total foodgrains in the seven districts in the Assam plains division for which fully revised data are available from 1951-52 to 1961-62.

The above period covers the first two Five-Year Plans, and is comparable to the Census decade 1951-62. Before going into the analysis it is to be noted

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1. The decennial growth of population was 11.85 per cent in Madras, 15.65 per cent in Andhra Pradesh, 16.66 per cent in Uttar Pradesh and 19.78 per cent in Bihar.

2. Growth Rates in Agriculture 1949-50 to 1964-65 issued by the Economic and Statistical Adviser, Ministry of Food and Agriculture, Government of India, 1966, p. 36.

3. More than 80 per cent of the cultivated area are under *Jhumming* in the hill districts. In the village survey undertaken by the Agro-Economic Research Centre, Jorhat, it was found that the estimation of area and production in *Jhumming* is beset with many difficulties, chief among them being the allocation of area to different crops. Moreover, crop cutting surveys are not undertaken in the *Jhum*. The hill areas are also not cadastrally surveyed.

that in the crop pattern of Assam, foodgrains occupy approximately 85 per cent and rice, 79 per cent of the gross cropped area (except tea) in 1950-51 and 1962-63. As such during the decade under study there is no appreciable change in the crop pattern.[4]

Methodology

For the study of growth rates, the fully revised estimates of area and production of rice and total foodgrains in the seven plain districts are converted into index numbers with the average for the first three years (1951-52 to 1953-54) as the base. Linear trends are fitted to the data irrespective of the goodness of fit. Standard deviations are, however, calculated.

Growth Rates

The trends of area and production of rice and total foodgrains by districts are given in Tables I and II with their standard deviations. It may be noted that in respect of area, the deviations are comparatively moderate than in the case of production which is subject to high fluctuations. It may be found that the rates of growth in area and production of both rice and total foodgrains are similar. It is because of the weightage of rice in the total foodgrains production.

TABLE I—TREND OF AREA UNDER RICE AND TOTAL FOODGRAINS IN ASSAM PLAINS DIVISION: 1951-52 TO 1961-62

Districts	Rice		Total foodgrains	
	Trend	Standard deviation	Trend	Standard deviation
Cachar	Y=107.87+1.91X	5.30	Y=107.44+1.93X	6.30
Goalpara	Y=104.67+1.76X	5.38	Y=107.73+1.66X	7.05
Kamrup	Y= 97.96+0.05X	2.70	Y= 98.74+0.16X	2.36
Darrang	Y=104.93+1.26X	3.80	Y=106.22+1.26X	6.91
Nowgong	Y=103.21+1.95X	7.21	Y=104.62+1.95X	6.75
Sibsagar	Y=109.69+2.11X	7.37	Y=109.19+2.02X	13.89
Lakhimpur	Y=100.71+0.96X	5.31	Y=100.59+0.95X	9.40
Assam plain division ..	Y=103.99+1.25X	4.24	Y=104.21+1.28X	4.54

Note : The point of origin 1956-57. X=One crop year.

It is found that during the period 1951-61, the production of rice and total foodgrains in the Assam plains division rose at the rate of 1 per cent, while the area under them rose at the rate of 1.3 per cent annually. Among the districts, Cachar, Sibsagar and Nowgong have growth rates of 4.8 per cent, 2.2 per cent and

4. Jute, the second most important crop, occupied approximately 5 per cent and 6 per cent of the total cropped area in 1950-51 and 1962-63 respectively.

TABLE II—TRENDS OF PRODUCTION OF RICE AND TOTAL FOODGRAINS IN ASSAM PLAINS DIVISION: 1951-52 TO 1961-62

Districts	Rice		Total foodgrains	
	Trend	Standard deviation	Trend	Standard deviation
Cachar	Y=122.95+4.82X	18.73	Y=122.92+4.74X	18.43
Goalpara	Y=100.55+0.43X	5.75	Y=100.62+0.38X	5.74
Kamrup	Y= 98.66—0.68X	6.27	Y= 99.00—0.68X	6.50
Darrang	Y=104.75+0.25X	11.19	Y=104.79—0.21X	11.46
Nowgong	Y=103.31+1.93X	14.87	Y=104.17+1.93X	13.98
Sibsagar	Y=108.13+2.20X	12.45	Y=111.13+1.95X	13.89
Lakhimpur	Y= 99.29+0.77X	9.48	Y= 99.18+0.68X	9.40
Assam plain division ..	Y=104.68+1.06X	4.58	Y=104.71+1.07X	4.54

Note : The point of origin 1956-57. X=One crop year.

1.9 per cent both in rice and total foodgrain production respectively. Kamrup and Darrang have negative growth rates of 0.7 per cent and 0.3 per cent respectively, while Goalpara and Lakhimpur have barely 0.4 per cent and 0.8 per cent growth in rice and foodgrains production. The growth in area under both rice and total foodgrains was almost uniform at the rates between 1 to 2 per cent in all the districts except Kamrup where the growth rate is quite negligible. No attempt has been made to identify the causes of such disparity in growth rates of districts. This would have revealed many interesting aspects, such as immigration and emigration, crop failures due to flood and drought, shift in cropping pattern, etc., which might have affected the growth rates.

Conclusion

The analysis has brought out quite a dismal picture in the growth rates in agriculture, particularly in food production. Against the growth rate of population at more than 3 per cent, the growth of food production is only 1 per cent, that too, through the extension of cultivation. It has also shown that the growth rates of different districts are not uniform, even though physical conditions and development efforts are, by and large, similar. If such studies can be done at the block level, the causes of failure and success will be easy to spot out. Such assessment will help in taking appropriate remedial measures. As the State of Assam is now fully covered by the Community Development programme, the importance of such studies cannot be over-emphasized.