

Food Production, Consumption and Nutritional Status In India



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INTRODUCTION

India is the top ranker in the production of pulses, rapeseed & jute, second in rice, wheat, groundnut, sugarcane, cotton, fruits & vegetables production, third in tea and tobacco and seventh in coffee production, but poverty and hunger still persists inspite of all these achievements. India's food grain production which was 82 million tonnes in 1960-61 reached to about 281 million tonnes in 2018-19.

The study is based on the data collected from the last four NSS rounds. The food grains production has increased at the rate of 1.66 percent per annum during 2010-11 to 2018-19 which is mainly because of productivity growth (1.54%). The net availability of foodgrains increased at an annual growth rate of 2.73 percent and per capita net availability of food grains increased at an annual growth rate of 1.53 percent during 2011-18.

METHODOLOGY

The data on area, production, productivity, availability of food grains and other related variables of important food grains were collected from different published sources such as; economic survey of India; agricultural statistics at a glance, etc. For the period 1980-81 to 2018-19. The data on consumption expenditure and nutrient intake for both rural and urban consumers were compiled from various rounds of national sample survey (NSS) organization. For the present study, the required data were collected for the last four NSS rounds viz. 50th (1993-94), 55th (1999-2000), 61st (2004-05) and 68th (2011-12).

RESULTS & DISCUSSION

Growth in food grains production : The all India compound growth rates in area, production and yield of food grain crops during 1980-81 to 1989-90, 1990-91 to 1999-00 and 2000-01 to 2009-10 and 2010-11 to 2018-19 are presented in table 1. During 1980s, area growth declined for most of the crops. Production growth was mainly due to yield growth. Despite a small negative growth in area under foodgrains, production recorded growth of 2.73 percent which is mainly due to yield growth (2.97 %).

As regards to growth during 1990s, it is found that growth in crop production observed during the period 1980s was not sustained during 1990s. The total foodgrains production growth declined to 2.09 percent in 1990s over previous decade.

During the period 2001-02 to 2009-10, the area growth improved slightly in some crops. The growth in production of foodgrains decreased slightly due to decline in area and yield growth during 2010-11 to 2018-19 over previous decade.

Net production and net availability of food grains: Table 2 reveals that net availability of foodgrains increased at an annual compound growth rate of 1.29 percent during 1991-2000, but the growth in per capita net availability per day was negative during this period. It may be due high population growth rate compared to growth in net availability in foodgrains. During the period, 2001-10, growth in net availability improved and extent of negative growth in per capita net availability decreased which may be due falling population growth rate. During the year 2011-18, growth in net availability in foodgrains further improved to 2.73 percent. The growth in per capita net availability not only became positive but increased at the rate of 1.53 percent per annum during this period. Thus, it discernible that per capita net availability has improved over the years. However, there have been variations in net availability of foodgrains.

Changes in nutrients intake : The per consumer unit daily nutrient intake over the years has been presented in Table 3. In rural areas, per consumer unit daily calorie intake continuously declined from 2153 during 1993-94 to 2047 during 2004-05 but increased to 2233 during 2011-12. In urban areas, it increased to 2206 in 2011-12 from 2071 in 1993-94 amidst fluctuations. It clearly indicates that nutritional status in both rural and urban India has increased.

Pattern of monthly consumption expenditure: The monthly per capita total consumption expenditure was only Rs. 281 in 1993-94 which increased to Rs. 1430 in 2011-12 in rural India indicating per annum increase by about 24 per cent (table 4). In urban areas, it has increased from Rs. 458 to Rs. 2630 during the same period exhibiting an annual increase by about 27 per cent. Thus, it is discernible fact that although the share of foodgrains (cereals+ pulses) in total consumption expenditure has declined, the share of high value items has increased. This fact favours that availability of fruit & vegetables, dairy products are also important along with foodgrains for accessing food security.

Shift in Cereals and pulses Consumption : The per capita cereal consumption showed a declining trend over different NSS Rounds in both the rural and urban areas (Table 5). The decline in cereal consumption may be largely because of urbanization and change in tastes and preferences for other food items like fruits, milk, meat, eggs, etc. Further, the consumption of pulses has slightly increased in both the areas.

Share of different food items in calorie intake over the years : The percentage break-up of calorie intake from different food items is presented in Table 6. The contribution of veg & fruits and sugar & honey in urban India and that of veg & fruits in rural India has shown slight decline over the years.

Incidence of poverty : Table 7 shows that over the years, the incidence of poverty has declined both in rural and urban areas. Area-wise incidence of poverty indicates that obviously percentage of poor people is more in rural areas compared to urban areas. Poverty leads to food insecurity and therefore, sustainable progress in poverty eradication is critical to improve access to food.

CONCLUSION

The food basket was found to be diversified both in rural and urban areas with higher levels of per capita consumption expenditure on milk and milk products, fruits and vegetables, meat, etc. The per capita calorie intake increased by about 3.71 percent in rural areas whereas in urban areas, it increased by 6.52 percent during 1993-2012. Similar to calorie intake, protein and fat intake has also shown increasing trend in both the areas. The share of cereals in total calorie and protein intake from different food items has declined.

Items	1980-81 to 1989-90			1990-91 to 1999-00			2001-02 to 2009-10			2010-11 to 2018-19		
	A	P	Y	A	P	Y	A	P	Y	A	P	Y
Rice	0.41	3.62	3.19	0.67	2.02	1.34	-0.02	1.75	1.61	0.48	1.75	1.62
Wheat	0.46	3.58	3.11	1.72	3.57	1.82	1.20	1.90	0.69	0.04	1.32	1.38
Coarse cereals	-1.34	0.35	1.71	-2.11	-0.01	2.14	-0.39	2.39	3.18	-1.96	0.73	2.73
Total cereals	-0.26	2.85	3.11	0.04	2.20	2.16	0.10	1.84	1.75	-0.43	1.41	1.88
Pulses	-0.23	1.49	1.58	-0.60	0.67	1.27	1.16	2.71	2.53	1.95	4.49	2.11
Total Food grains	-0.23	2.73	2.97	-0.08	2.09	2.17	0.29	1.92	1.60	0.15	1.66	1.54
Oilseeds	2.44	5.45	2.95	0.15	2.27	2.12	2.45	5.14	2.62	-0.83	-0.34	0.56

Table 1: Annual compound growth rates of area, production and yield of food grains in India

*Note: A - Area, P - Production, Y - Productivity

Year	Production (Million tonnes)	Net production (Million tonnes)	Net availability (Million tonnes)	Per capita net availability/day (gram)	Population (Million)	Rural			Urban				
						Calorie (cals)	Protein (gms)	Fat (gms)	Calorie (cals)	Protein (gms)	Fat (gms)		
1991	176.4	154.3	158.1	510.1	851.7								
1995	191.5	167.6	166.7	495.4	922.1								
2000	209.8	183.6	168.3	454.4	1014.8								
2005	198.4	173.6	170.1	422.4	1102.8								
2010	218.1	190.8	189.2	437.1	1185.8								
2015	252.7	221.1	213.7	465.1	1259.1								
2016	251.6	220.2	218.0	468.8	1273.9								
2017	275.1	240.7	229.8	488.7	1288.5								
2018	284.8	249.2	230.3	484.3	1302.9								
CGR 1991-00	2.07	2.10	1.26	-0.68	2.00								
CGR 2001-10	1.89	1.90	1.29	-0.25	1.54								
CGR 2011-18	1.63	1.63	2.73	1.53	1.18								

Table 2: Net production and net availability of food grains in India India

Table 3: Changes in per capita intake of calorie, proteins and fats over different NSS Rounds

Year/NSS Rounds	Per cent of total food expenditure						Beverages	Others	Food expenditure (Rs)	Non-food expenditure (Rs)	Total Consumption Expenditure (Rs.)
	Cereals	Pulses	Milk and milk products	Oil seeds	Meat, egg, fish	Fruits and veg.					
Rural											
1993-94	38.3	6.2	15.0	7.0	5.3	12.3	6.5	9.4	178.0	103.0	281.0
1999-00	37.3	6.4	14.7	6.28	5.6	13.3	7.1	9.4	289.0	197.0	486.0
2004-05	32.7	5.6	15.5	8.4	6.0	14.6	8.2	9.0	308.0	251.0	559.0
2011-12	20.4	5.5	15.2	7.0	9.0	18.0	14.9	9.9	756	673	1430
Urban											
1993-94	25.7	5.6	18.0	8.0	6.2	14.9	13.2	8.4	250.0	208.0	458.0
1999-00	25.7	5.9	18.0	6.5	6.5	15.7	13.2	8.5	411.0	444.0	855.0
2004-05	25.8	5.8	18.1	8.1	6.4	15.6	14.6	5.5	447.0	605.0	1052.0
2011-12	15.6	4.8	16.4	6.2	8.5	19.4	21.1	7.8	1121	1509	2630

Table 4: Monthly per capita consumption expenditure over various NSSO Rounds in India

Year	Rural areas					Urban areas				
	Rice	Wheat	Coarse cereals	Total cereals	Pulses	Rice	Wheat	Coarse cereals	Total cereals	Pulses
1993-94	6.79	4.32	2.39	13.4	0.76	5.13	4.44	1.03	10.6	0.86
1999-2000	6.59	4.45	1.68	12.72	0.84	5.10	4.45	0.87	10.42	1.00
2004-05	6.38	4.19	1.55	12.12	0.71	4.71	4.36	0.87	9.94	0.82
2011-12	5.98	4.29	0.95	11.22	0.78	4.49	4.01	0.78	9.28	0.90

Table 5: Average per capita consumption of cereals and pulses in rural and urban areas (per capita qty (kg) consumed in 30 days)

Year	% share of calorie intake from								
	cereals	Roots & tubers	Sugar & honey	Pulses & oilseeds	Veg & fruits	Meat, eggs & fish	Milk & milk products	Oils & fats	Misc food.
Rural									
1993-94	71.03	2.65	4.80	4.92	2.02	0.68	6.15	5.34	2.41
1999-2000	67.55	3.25	5.44	5.46	1.97	0.77	6.17	7.37	2.32
2004-05	67.54	2.95	4.78	4.98	2.23	0.76	6.42	7.36	2.98
2011-12	61.10	3.01	4.90	5.20	1.85	0.82	7.07	9.01	7.04
Urban									
1993-94	58.53	2.54	6.21	6.05	3.26	1.02	8.00	8.79	5.60
1999-2000	55.05	2.90	6.15	6.86	2.94	1.12	8.23	11.24	5.52
2004-05	56.08	2.82	5.69	6.68	3.17	1.05	8.61	10.58	5.32

Table 6: Percentage break-up of calorie consumption over different food groups

Year	Poverty ratio (%)			Number of Poor (Million)		
	Rural	Urban	Total	Rural	Urban	Total
1993-94	50.1	31.8	45.3	328.6	74.5	403.7
2004-05	41.8 (0.75)	25.7 (0.55)	37.2 (0.74)	326.3	80.8	407.1
2009-10	33.8 (2.32)	20.9 (1.69)	29.8 (2.18)	278.2	76.5	354.7
2011-12	25.7 (1.36)	13.7 (1.01)	21.9 (1.30)	216.7	53.1	269.8

Table 7: Percentage and number of poor estimated from Expert Group (Tendular) methodology