

Changes in the Food Consumption of the Rural Households in Andhra Pradesh

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Abstract

At the global level the per capita food production has gone up in all countries with the industrialized countries on the lead. However, the low nutritional status remained major problem particularly among the rural population. The low nutritional status of the rural population is to be viewed as the problem of poor quality of food intake due to low literacy and lack of awareness. Due to Green Revolution the food grains production is increased. The consumption of rice in Andhra Pradesh is higher than All India. Bajra and maize are also less consumed in Andhra Pradesh. The consumption of the major cereals declined at both State level and All India level over a period of time. The consumption of bajra and maize per person has also noticeable decline in rural areas over the period. The smaller cereal items such as barley, maize and tapioca, recorded larger declines in rural areas over this period.

Introduction

Generally it is argued that low agricultural production and lack of an appropriate food distribution system are the reasons for low levels of the nutritional status. In addition to the low agricultural production, the nutritional status of the rural population is to be viewed as the problem of poor quality of food intake due to low literacy and lack of awareness. Economic development is normally accompanied by improvements in a country's food supply and the gradual elimination of dietary deficiencies, thus improving the overall nutritional status of the country's population. Further more, the development also brings about qualitative changes in the production, processing, distribution and marketing of food. Increasing urbanization will also have consequences for the dietary patterns and lifestyles of individuals, not all of which are positive. Moreover, the pace of these changes seems to be accelerating, especially in the low-income and middle-income countries. At the

same time, however, poor countries continue to face food shortages and nutrient inadequacies. Presently, in India one per cent or 10 million are not getting two square meals a day. Food consumption expressed in kilocalories (kcal) per capita per day is a key variable used for measuring and evaluating the evolution of the global and regional food situation. A more appropriate term for this variable would be "national average apparent food consumption" since the data come from national food balance sheets rather than from food consumption surveys.

Global And Regional Per Capita Food Consumption

Analysis of FAOSTAT data shows that dietary energy measured in kcals per capita per day has been steadily increasing on a world wide basis; availability of calories per capita from the mid -1960s to the late 1990s increased globally by approximately 450 kcal per capita per day and by over 600 kcal per capita per day in developing countries (Table-1). This change has not, however, been equal across regions. The per capita supply of calories has remained almost stagnant in sub-Saharan Africa and recently fallen in the countries in economic transition. In contrast, the per capita supply of energy has risen

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dramatically in East Asia (almost 1000 kcal per capita per day, mainly in China) and in the Near East/North Africa region (by over 700 kcal per capita per day). The agriculture seasons and irrigation facilities will influence the food intake of the households. For example, in Cambodia between harvests to lean season most rural households face 5 to 30 per cent reduction in their rice intake. Even in Thailand there is a difference in food intake in the wet season and dry season, especially among the mountainous regions. The difference in food intake also exists within household due to some preferences and these are more prominent based on seasonal variations. In South Asia, with considerable variation within that region, the evidence on food distribution within the household suggests pro-male and pro-adult bias in terms of quantity of food intake. Inequality may also be affected by seasonality, with lower inequality during the harvest as opposed to the lean season.

55th and 61st rounds of the National Sample Survey (NSS).

(a). *Cereals*

The magnitude and trend in Food, especially Cereals, consumption over a period of time in rural Andhra Pradesh gets importance in view of its strong implications for Food and nutrition security. Such an analysis is necessary due to the failure of expenditure and income based poverty magnitudes to depict the true picture on Food and nutrition security in a period of significant changes in the nature of Food consumption with strong implications for the household's calorie intake. This section provides evidence, on the magnitude and trends in Food consumption in rural Andhra Pradesh.

Table 2 presents the per capita monthly consumption of major cereals in rural areas between 1993-94 and 2004-05 both in All-India and Andhra Pradesh. It could be

Table 1: Global And Regional Per Capita Food Consumption
(kcal per capita per day)

Region	1964-1966	1974-1976	1984-1986	1997-1999	2015	2030
World	2358	2435	2655	2803	2940	3050
Developing Countries	2054	2152	2450	2681	2850	2980
Near East and North Africa	2290	2591	2953	3006	3090	3170
Sub-Saharan Africa	2058	2079	2057	2195	2360	2540
Latin America and the Caribbean	2393	2546	2689	2824	2980	3140
East Asia	1957	2105	2559	2921	3060	3190
South Asia	2017	1986	2205	2403	2700	2900
Industrialized Countries	2947	3065	3206	3380	3440	3500
Transition Countries	3222	3385	3379	2906	3060	3180

Source: Literature, food consumption and Nutrition Division, International Food Policy research Institute, Discussion Paper No. 19.

Changes In Food Consumption

The national sample survey organization publishes various reports based on the quinquennial surveys. The data used for this paper in this analysis are collected from 50th,

observed from the table that the consumption of rice in Andhra Pradesh is higher than All India where as wheat consumption is lower than All India. Bajra and maize also less consumed in Andhra Pradesh compared to All India. It is clear from the table that over the

Table 2: Percapita Monthly Consumption Of Major Cereals In Rural Areas Between 1993-1994 And 2004-05

(Quantity in Kgs)

Major Cereals	Andhra Pradesh			All India		
	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)
Rice	11.57	11.71	10.951	6.79	6.57	6.38
Wheat	0.19	0.22	0.144	4.32	4.45	4.19
Jowar & its products	0.98	0.44	0.483	0.84	0.50	0.43
Bajra & its products	0.09	0.04	0.039	0.48	0.38	0.39
Maize & its products	0.07	0.02	0.007	0.38	0.32	0.32
All Cereals	13.27	12.65	12.035	13.4	12.72	12.12

Table 3: Monthly Per Capita Consumption Of Cereals In The Rural Areas Of Andhra Pradesh Between 1972-1973 And 2004-05.

Item	27 th Round (1972-73)	32 nd Round (1977-78)	38 th Round 1983	43 rd Round (1987-88)	50 th Round (1993-94)	55 th Round (1999-00)	61 st Round (2004-05)
Rice	8.96	10.86	11.79	11.39	11.57	11.71	10.951
Wheat	0.12	0.11	0.12	0.14	0.19	0.22	0.144
Coarse Cereals	6.17	4.88	3.46	2.82	1.51	0.72	0.936
Cereals	15.25	15.85	15.37	14.35	13.27	12.65	12.035

period the consumption of the major cereals declined at both State level and All India level. It could be inferred that the fall in Jowar consumption cannot explain the fall in the national and State per capita cereal consumption, but the consumption of bajra and maize per person has also undergone a noticeable decline in rural areas over the eleven years between 1993-94 and 2004-05.

From Table 3 it is clear that during the period of three decades the increase in the consumption of rice and wheat is less than the decrease in the consumption of coarse cereals which resulted in overall decline in the total

consumption in the State.

The NSS data reveal that the per capita cereal consumption in India has been declining since the early seventies despite a significant increase in per capita cereal production. The extent of decline in calorie intake has however carried significantly between different regions. The sharp fall in cereal consumption has been attributed to changes in consumer preferences from food to non-food items, and within the food group from cereals to non-cereal food items and from 'coarse' to 'fine' cereals. More recently, a study has shown that the decline in cereal consumption was greater in the rural

Table 4: Percapita Monthly Consumption Of Major Pulses In Rural Areas Between 1993-1994 And 2004-2005

(Quantity in Kgs)

Major Pulses	Andhra Pradesh			All India		
	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)
Arhar	0.35	0.39	0.424	0.24	0.23	0.21
Moong	0.18	0.12	0.089	0.10	0.10	0.09
Masur	0.02	-	0.008	0.12	0.14	0.11
Urd	0.09	0.11	0.104	0.10	0.09	0.08
Gram (Split)	0.05	0.07	0.050	0.06	0.08	0.06
All Pulses & Pulse Products	0.70	0.73	0.702	0.76	0.84	0.71

Table 5: Percapita Monthly Consumption Of Milk, Eggs, Fish & Meat In Rural Areas Between 1993-1994 And 2004-2005

NSSO Rounds	Andhra Pradesh			All India		
	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)
Milk (Liters)	2.62	2.87	3.051	3.94	3.79	3.87
Eggs (No.)	1.44	2.07	2.251	0.64	1.09	1.01
Fish (kg.)	0.11	0.18	0.071	0.18	0.21	0.201
Goat Meat/ Mutton (Kg.)	0.13	0.10	0.086	0.06	0.07	0.047
Chicken (Kg.)	0.05	0.10	0.136	0.02	0.04	0.050

Table 6: Percapita Monthly Consumption of Edible Oil in Rural Areas between 1993-1994 and 2004-2005

(Quantity in Kgs)

NSSO Rounds	Andhra Pradesh			All India		
	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)
Groundnut Oil	0.36	0.29	0.239	0.12	0.12	0.07
Mustard Oil	-	-	0.001	0.17	0.24	0.22
Vanaspati	-	-	0.001	0.03	0.04	0.03
Edible Oil (Other)	-	0.17	0.312	0.05	0.09	0.14
Edible Oil (All)	-	0.46	0.554	0.37	0.50	0.48

areas, where the improved rural infrastructure made other food and non-food items easily accessible to the rural households. The study further observes that a reduction in the intake of cereals on this account should not be taken as deterioration in biological welfare and argues that reduction in hard manual work in agriculture due to farm mechanization might have put downward pressure on the nutritional requirements. The structural factors underlying the changing preferences and their implications for nutritional well-being are little researched and there are severe knowledge gaps.

Table 4 presents Andhra Pradesh and All India consumption levels between 1993-94 and 2004-05 of five common varieties of pulses in rural areas. In most cases, there appears to have been a rise in consumption between 1993-94 and 1999-2000 and a fall in the latter years. This, however, appears rather unlikely and a more plausible explanation is that the collection of data with the usual reference period of "last 30 days" might have, in the 55th round (1999-2000), been affected by the collection of data with an extra reference period of "last 7 days" immediately before it. This effect appears to have been the strongest in case of such items as pulses, fruits and

Table 7: Percapita Monthly Consumption Of Common Vegetables In Rural Areas Between 1993-1994 And 2004-2005

(Quantity in Kgs)

Vegetables	Andhra Pradesh			All India		
	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)
Potato	0.17	0.26	0.223	1.24	1.61	1.33
Onion	0.60	0.69	0.719	0.46	0.58	0.56
Brinjal	0.4	0.47	0.402	0.41	0.39	0.34
Cauliflower	0.06	-	0.021	0.16	0.19	0.18
Cabbage	0.05	0.08	0.085	0.15	0.18	0.17
Tomato	0.47	0.57	0.634	0.29	0.35	0.34

Table 8: Percapita Monthly Consumption Of Common Fruits & Nuts In Rural Areas Between 1993-1994 And 2004-2005

(Quantity in Kgs)

Fruits & Nuts	Andhra Pradesh			All India		
	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)	50 th Round (1993-94)	55 th Round (1999-2000)	61 st Round (2004-2005)
Banana (No.)	2.85	3.17	3.913	2.20	2.48	2.37
Coconut (No.)	0.22	0.22	0.269	0.32	0.37	0.35
Mango (Kg.)	0.10	0.06	0.152	0.06	0.10	0.09
Apple (Kg.)	0.01	-	0.019	0.03	-	0.03
Groundnut(Kg.)	0.05	0.03	0.059	0.03	0.05	0.05

vegetables, where the monthly consumption of individual items is not as well known to most informants as it is in case of cereals. If we assume, therefore, that the 1999-2000 data are not comparable with those of the other years, the picture is simplified, with the figures showing a small reduction in per capita consumption for most varieties of pulses between 1993-94 and 2004-05 at All India level. In case of Andhra Pradesh the consumption of arhar reported increasing. The average household's consumption of pulses appears to be getting more diversified.

(c). Milk, Eggs, Fish & Meat

There appears to have been a slight fall in per capita consumption of "milk (liquid)" in rural All India and a slight rise in Andhra Pradesh between 1993-94 and 2004-05 (Table-5). Rural per capita egg consumption has apparently increased in the eleven years in both Andhra Pradesh and All India. Per capita consumption of goat meat and mutton has definitely declined, more so in Andhra Pradesh. The increase in per capita consumption levels of chicken appears to be increased at All India but is increased three-fourth times in Andhra Pradesh. Per capita consumption of chicken has outstripped goat meat and mutton in rural India.

(d). Edible Oils

Per capita consumption of edible oil has definitely been rising over the eleven years following 1993-94. Table-6 shows the extent of increase in rural All India and in Andhra Pradesh. In All India rural areas, there has been a fall of about 50 gm per person per month in the consumption of groundnut oil, offset by a corresponding rise for mustard oil. In Andhra Pradesh the decline in per capita consumption of groundnut oil is about 140 gm per month, which is more than the rise in mustard oil and vanaspati consumption. In both Andhra Pradesh and All India, per capita consumption of oil other than groundnut oil,

mustard oil, vanaspati and has more than doubled, increasing steadily both before and after 1999-2000. Such oil would include sunflower oil, soyabean oil, other vegetable oil and rice bran oil.

(e). Vegetables

Table 7 shows levels of consumption of some common vegetables between 1993-94 and 2004-05. The per capita consumption levels of the vegetables listed have increased except brinjal. Per capita monthly consumption of potato, cauliflower, cabbage is lower in Andhra Pradesh than All India. Consumption of onions, tomatoes per person per month is higher in Andhra Pradesh than All India. For all the vegetables in All India, potatoes, brinjal, onion, cauliflowers, cabbages and tomatoes, the 55th round estimates (1999-2000) suggest an increase in per capita consumption in the period before 1999-2000 and a fall subsequently, which is unlikely. In Andhra Pradesh except potato and brinjal all the other vegetables reported an increase.

(f). Fruits And Nuts

The consumption of bananas is higher in Andhra Pradesh compared to All India and it reported an increase in the eleven years. The increase is higher in Andhra Pradesh than All India (Table-8).

The per capita monthly consumption of coconut and apple is higher in All India than Andhra Pradesh where as per capita monthly consumption of mango and groundnuts are higher in Andhra Pradesh than All India. Over eleven years the consumption of coconut has increased both in All India and Andhra Pradesh. The consumption of mango, apple and ground nut recorded a decrease in 1999-2000 and then increased in 2004-05 in Andhra Pradesh. It could also be observed that the consumption of mango increased in 1999-2000 and then decreased in 2004-05, which is quite opposite scenario of Andhra Pradesh.

Conclusions

Agriculture supplies input for dietary intake along with income to the farmers' investment. The green revolution has increased food grain production by four fold and assumed higher returns to the farmers. Food grain production had nearly kept pace with population growth and as a result per capital food grain availability had increased.

The consumption of rice in Andhra Pradesh is higher than All India where as wheat consumption is lower than All India. Bajra and maize are also less consumed in Andhra Pradesh compared to All India. Over the period the consumption of the major cereals declined at both State level and All India level. The fall in Jowar consumption cannot explain the fall in the national and State per capita cereal consumption, but the consumption of bajra and maize per person has also undergone a noticeable decline in rural areas over the eleven years between 1993-94 and 2004-05.

There is switch in food consumption throughout the 1990s from Cereals, which are a source of cheap calories, to more expensive calorie sources such as Meat, Fish and Eggs and Fruits/Vegetables, resulted in a decline in calorie intake. The calorie share of the composite item, called "Other Cereals", consisting of the smaller cereal items such as barley, maize and tapioca, recorded larger declines in rural areas over this period.

The decline in cereal consumption, and an increase in the prevalence of undernourishment over the period, 1987/88 – 2001/2002 suggests that, as the rice and wheat continue to provide the dominant share of calories, especially for the rural poor there is a need for a reassessment of the current strategy of directing the Targeted Public Distribution System (TPDS) exclusively at households "below the poverty line" (BPL).

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