

**THE PULSES ECONOMY OF INDIA:
CHANGING CONSUMPTION PATTERN AND
ITS IMPACT ON PROTEIN NUTRITION
(1993-94 TO 2004-05)**

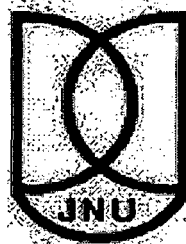
Dissertation submitted to Jawaharlal Nehru University

in partial fulfillment of the requirements

for the award of the degree of

MASTER OF PHILOSOPHY

MANISH MISHRA



CENTRE FOR ECONOMIC STUDIES AND PLANNING

SCHOOL OF SOCIAL SCIENCES

JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI- 110067

INDIA

2011



25 July 2011

CERTIFICATE

This is to certify that the dissertation entitled 'THE PULSES ECONOMY OF INDIA: CHANGING CONSUMPTION PATTERN AND ITS IMPACT ON PROTEIN NUTRITION (1993-94 TO 2004-05)' submitted by Mr. MANISH MISHRA in partial fulfillment of the requirement for the award of the degree of MASTER OF PHILOSOPHY (M. Phil.) of this university, has not been submitted, in part or full, for any other degree of this or any other university.

We recommend that the dissertation be placed before the examiners for evaluation.

Prof. Arun Kumar

(Chairperson)
ARUN KUMAR
Chairperson
Centre for Economic Studies & Planning
SSS/JNU/New Delhi - 110 067

Prof. Deepak Nayyar

(Supervisor)
SUPERVISOR
CESP/SSS/JNU

I hereby declare that this is my original work to the best of my knowledge.

Manish Mishra

(Candidate)

DEDICATED TO,

THE HUNGRY MILLIONS....

ACKNOWLEDGEMENT

This page of acknowledgement is too small to thank all those who have helped me come this far because every good work that I do has the contribution of so many people who for years have made me capable to do so. But there are some who stand out in my life above all others.

I would first like to thank my parents for all that they have done for me. No words can give expression to my indebtedness to them.

I am honoured that I had the opportunity to work and learn under the guidance of Prof. Deepak Nayyar. He has always been more than a supervisor, patiently tolerating all my mistakes and correcting them. I will always cherish his guidance, encouragement and words of wisdom. Life is all about managing conflicting objectives and there could have been no other person to learn it from than him.

My friends have been my most cherished possession. Discussions with them helped a lot in my work. I would like to thank Rishi, Kapil Patidar, Ajit, Rijula Uniyal, Vishal Pratap Singh, Deepak Agarwal, Achyutam, Amita, Apparao Kasa, Avinash Mani Tripathi, Awanish, Abhinav, Rajeev, Parul, Dipika, Karamjeet, Laysang, Deepak, Snehasis, Avanindra Thakur, Umesh, Yogendra and all others who were always there for all the help and support.

Special thanks to my little sister, Puja, for making me see life go back in time. Last, but not the least, a very special thanks to Misti for making this life worth living.

Contents

Acknowledgement

List of Tables

List of Figures

List of Tables - Appendix

CHAPTER 1: INTRODUCTION [10]

CHAPTER 2: THE PULSES ECONOMY OF INDIA – AN OVERVIEW OF THE SUPPLY SIDE [14]

- 2.1: Basic Information on Pulses in India [15]**
- 2.2: Production of Pulses (in comparison with Rice and Wheat) [17]**
- 2.3: Area under Pulses (in comparison with Rice and Wheat) [19]**
- 2.4: Yield of Pulses (in comparison with Rice and Wheat) [22]**
- 2.5: Area under irrigation in Pulses (in comparison with Rice and Wheat) [23]**
- 2.6: Probable reasons for the stagnation in the pulses economy [25]**
- 2.7: Compound Growth Rates of Production, Area and Yield [29]**
- 2.8: Per capita net availability of total Pulses (in comparison to total cereals) [30]**
- 2.9: Important observations [33]**

CHAPTER 3: THE PULSES ECONOMY OF INDIA (1993-94 to 2004-05) - A DEMAND SIDE ANALYSIS [35]

- 3.1: Some concepts - MPCE and MPCE Classes [37]**
- 3.2: Methodology [38]**
- 3.3: Consumption of Rice [39]**
- 3.4: Consumption of Wheat [41]**
- 3.5: Consumption of Total Cereals [42]**
- 3.6: Consumption of Pulses and Pulse Products [43]**
- 3.7: Consumption of Arhar [48]**
- 3.8: Consumption of Gram (split) [49]**
- 3.9: Consumption of Gram [52]**
- 3.10: Consumption of Moong [54]**
- 3.11: Consumption of Masur [56]**
- 3.12: Consumption of Urad [57]**
- 3.13: Consumption of Khesari [59]**
- 3.14: Consumption of Peas [60]**
- 3.15: Consumption of 'Other Pulses' [61]**
- 3.16: Probable reasons for such a consumption pattern [62]**
- 3.17: Important Observations [64]**

CHAPTER 4: THE PULSES ECONOMY OF INDIA: THE DEMAND-SUPPLY MISMATCH AND ITS NUTRITIONAL CONSEQUENCES (1993-94 to 2004-05) [68]

- 4.1: Importance of Proteins [71]**
- 4.2: Pulses as an important source of protein [72]**
- 4.3: Protein intake (1993-94 to 2004-05) [74]**
 - 4.3.1: Percentage of proteins derived from different sources [74]**
 - 4.3.2: Per capita per day intake of Proteins [78]**
- 4.4: Important observations [91]**

CHAPTER 5: CONCLUSION [96]

5.1: Review of Objective [96]

5.2: Important Observations of Chapter 2 - THE PULSES ECONOMY OF INDIA – AN OVERVIEW OF THE SUPPLY SIDE [98]

5.3: Important Observations of Chapter 3 - THE PULSES ECONOMY OF INDIA (1993-94 to 2004-05) — A DEMAND SIDE ANALYSIS [99]

5.4: Important observations of Chapter 4 - THE PULSES ECONOMY OF INDIA: THE DEMAND-SUPPLY MISMATCH AND ITS NUTRITIONAL CONSEQUENCES (1993-94 to 2004-05) [102]

5.5: The larger perspective [106]

APPENDIX – TABLES [112 to 230]

BIBLIOGRAPHY [231]

List of Tables

- **Table 2.1:** Area and Production of important pulse crops in 1990-91 and 2008-09
- **Table 2.2:** Compound Growth Rates (1949-50 to 2006-07) (Base: T.E. 1981-82=100) (% per annum)
- **Table 2.3:** Compound growth Rates of Area (A), Production (P) and Yield (Y) since 1990s (Base: T.E.1981-82=100)
- **Table 3.1.1:** MPCE Classes 50th Round (1993-94) and 61st Round (2004-05) for Rural and Urban Areas

List of Figures

- **Figure 2.1:** All-India Production (million tonnes) of Rice, Wheat and Pulses since 1950-51
- **Figure 2.2:** All-India Production (million tonnes) of Pulses since 1990-91
- **Figure 2.3:** Pulses as a percentage of total foodgrains production
- **Figure 2.4:** All-India area (million hectares) of Rice, Wheat and Pulses since 1950-51
- **Figure 2.5:** All-India area (million hectares) of Pulses since 1990-91
- **Figure 2.6:** Pulses area as a percentage of total area under foodgrains since 1950-51
- **Figure 2.7:** All-India yield (kg/hectares) of Rice, Wheat and Pulses since 1950-51
- **Figure 2.8:** All-India yield (kg/hectares) of Pulses since 1990-91
- **Figure 2.9:** All-India area under irrigation (%) of total area under Rice, Wheat and Pulses since 1950-51
- **Figure 2.10:** All-India area under irrigation (%) of total area under Pulses since 1990-91
- **Figure 2.11:** Index Number of wholesale prices for pulses and 'all commodities' since 1994-95
- **Figure 2.12:** Per capita net availability per day of cereals since 1951
- **Figure 2.13:** Per capita net availability per day of pulses since 1951
- **Figure 2.14:** Pulses imports as percentage of domestic production since 1990-91

List of Tables in Appendix

- **Tables 3.1 – 3.4:** Related to average monthly per capita consumption (kg) of **Pulses and Pulse Products – Rural**
- **Tables 3.5 – 3.8:** Related to average monthly per capita consumption (kg) of **Pulses and Pulse Products -- Urban**
- **Tables 3.9 – 3.12:** Related to average monthly per capita consumption (kg) of **Gram (split) -- Rural**
- **Tables 3.13 – 3.16:** Related to average monthly per capita consumption (kg) of **Gram (split) -- Urban**
- **Tables 3.17 – 3.20:** Related to average monthly per capita consumption (kg) of **Gram – Rural**
- **Tables 3.21 – 3.24:** Related to average monthly per capita consumption (kg) of **Gram – Urban**
- **Tables 3.25 – 3.28:** Related to average monthly per capita consumption (kg) of **Arhar – Rural**
- **Tables 3.29 – 3.32:** Related to average monthly per capita consumption (kg) of **Arhar – Urban**
- **Tables 3.33 – 3.36:** Related to average monthly per capita consumption (kg) of **Moong – Rural**
- **Tables 3.37 – 3.40:** Related to average monthly per capita consumption (kg) of **Moong – Urban**
- **Tables 3.41 – 3.44:** Related to average monthly per capita consumption (kg) of **Masur – Rural**
- **Tables 3.45 – 3.48:** Related to average monthly per capita consumption (kg) of **Masur – Urban**
- **Tables 3.49 – 3.52:** Related to average monthly per capita consumption (kg) of **Urad – Rural**
- **Tables 3.53 – 3.56:** Related to average monthly per capita consumption (kg) of **Urad – Urban**
- **Tables 3.57 – 3.60:** Related to average monthly per capita consumption (kg) of **Khesari – Rural**

- **Tables 3.61 – 3.64:** Related to average monthly per capita consumption (kg) of **Khesari – Urban**
- **Tables 3.65 – 3.68:** Related to average monthly per capita consumption (kg) of **Peas – Rural**
- **Tables 3.69 – 3.72:** Related to average monthly per capita consumption (kg) of **Peas – Urban**
- **Tables 3.73 – 3.76:** Related to average monthly per capita consumption (kg) of **Other Pulses – Rural**
- **Tables 3.77 – 3.80:** Related to average monthly per capita consumption (kg) of **Other Pulses – Urban**
- **Tables 3.81 – 3.84:** Related to average monthly per capita consumption (kg) of **Rice – Rural**
- **Tables 3.85 – 3.88:** Related to average monthly per capita consumption (kg) of **Rice – Urban**
- **Tables 3.89 – 3.92:** Related to average monthly per capita consumption (kg) of **Wheat – Rural**
- **Tables 3.93 – 3.96:** Related to average monthly per capita consumption (kg) of **Wheat – Urban**
- **Tables 3.97 – 3.100:** Related to average monthly per capita consumption (kg) of **Total Cereals – Rural**
- **Tables 3.101 – 3.104:** Related to average monthly per capita consumption (kg) of **Total Cereals – Urban**
- **Table 4.1:** Nutritional value of selective pulses, foodgrains and oilseeds (value per 100 gms of edible proportion)
- **Tables 4.2 – 4.4:** Related to percentage of total intake of proteins derieved from different groups of food items – **Rural**
- **Tables 4.5 – 4.7:** Related to percentage of total intake of proteins derieved from different groups of food items – **Urban**
- **Tables 4.8 – 4.11:** Related to per capita per day intake of proteins (gms) – **Rural**
- **Tables 4.12 – 4.15:** Related to per capita per day intake of proteins (gms) – **Urban**

CHAPTER 1

INTRODUCTION

Every work of research raises some important questions and tries to analyse them. One of the first among them should be the very rationale for taking up research in the topic. My area of interest in research is food security. Being born in a country which has the dubious distinction of being home to the largest number of hungry people in the world, being interested in such issues is obvious and also required for the development of the nation, especially its disadvantaged sections.

In recent times, the world has witnessed food riots in several countries that even led to toppling of long dictatorial regimes like that in Tunisia and Egypt. As I write this, Libya and several countries in Africa continue to burn. The major resentments and protests in these countries had started majorly due to high food prices (together with growing unemployment). At the national level, over the last couple of years we have seen high food price inflation which continues even today. All these events have brought the issue of food security again to the forefront in national and international policy circles.

In India, while there is this big debate going on, on the proposed Food Security Bill, which will be encompassing rice, wheat and millets, my dissertation focuses on a sector which though is no less important from the point of view of food and nutritional security but has been neglected for decades -- the pulses economy of India.

Pulses are mainly the edible dry seeds of leguminous plant. They are known for their high content of proteins (which is two to three times more than cereals). Compared to other good sources of proteins, they are also the cheapest among them. They also have high values of energy and are a very good source of other micronutrients like calcium and iron (a detailed analysis of the nutritional importance of pulses is done in Chapter 4). Thus their importance for food and nutritional security in a largely vegetarian low-income-food-deficit country like India needs no further explanation. Also, they are an asset for sustainable agriculture. These legumes fix atmospheric nitrogen and increase the fertility of soil naturally.

While going through the various research studies on the pulses economy of India, I found that there is an imbalance between the studies on the demand side and supply side. While there is plenty of research on the latter, very few studies have been done on former. This is a humble attempt to analyse the demand side of the pulses economy in India.

The objective of the study, as its title suggests, is to analyse the consumption pattern of pulses in the period 1993-94 and 2004-05 and to find its impact on protein nutrition.

Three chapters (Chapter 2, 3 and 4) address the different issues relating to the objective. Chapter 2 provides the reader a brief overview of the supply side of the pulses economy in India. This is important for a holistic understanding of the issue. This chapter looks at some of the most crucial macro variables of the supply side for e.g. production, area, yields, area under irrigation, per capita net availability etc. and also compares them with that of wheat and rice.

Chapter 3 and 4 are the essence of this dissertation. Chapter 3 looks at the demand side of the pulses economy in India. This chapter analyses the level and pattern of pulses consumption in India between the periods 1993-94 and 2004-05. For this, National Sample Survey Organisation (NSSO) data relating to quinquennial rounds 50th (1993-94) and 61st (2004-05) are used. An in-depth analysis is done for most of the states in India and for both rural and urban areas. All the pulses for which NSSO data is available have been taken into consideration. This chapter divides the population into three consumer expenditure groups—the bottom 30 percentile, middle 40 percentile and the upper 30 percentile, and does the above analysis for each of them to find out how the consumption patterns are changing in the different income groups over the period of study. This methodology, to the best of my knowledge, has not been used for analysing the pulses economy. Level and pattern of consumption of rice, wheat and total cereals are also analysed for this period.

Chapter 4 is a continuation of Chapter 3 and the objective of this chapter is to analyse the impact of changing consumption pattern for pulses (and cereals) on the protein nutrition of the population. Here again, NSSO data of the quinquennial rounds 50th (1993-94) and 61st (2004-05) are taken. This chapter highlights the importance of proteins in our body and the importance of pulses as a good source of the same, especially for the large vegetarian population of the country and more so for the poor who cannot afford expensive animal protein sources like eggs, fish and meat. A state-wise analysis is done and a correlation is sought to be achieved between the changing levels of protein intake and changing consumption patterns as seen in chapter 3.

Chapter 5 concludes the study, weaving together the important observations of the three chapters and addressing the issue from a larger perspective.

CHAPTER 2

THE PULSES ECONOMY OF INDIA - AN OVERVIEW OF THE SUPPLY SIDE

This chapter gives a brief overview of the supply side of the pulses economy of India. An attempt has been made to familiarize the reader to crucial aspects of the supply side to help build a holistic idea (together with the in-depth demand side analysis of Chapter 3) and also to understand the analysis of the demand-supply mismatch and its nutritional consequences in Chapter 4. Literature is rich in the analysis of the supply side of the pulses economy and here we just look at some of the most important variables.

Most trend analysis in this chapter is done over the period since 1950-51 but special focus has been on the period since 1990-91. This year is important because pulses were included in the Technology Mission in this year. Also this would give an idea of the performance in the liberalisation period.

Recognizing the limited scope of this chapter, as this is just to provide an overview, analysis of individual pulses and performance of different states have not been done. In most places, total of all pulses has been the variable considered and analysis has been done at the all-India level. Comparison with rice and wheat has been done in most sections.

Section 2.1 provides some basic information on pulses in India. Section 2.2 analyses the production scenario of pulses and compares it

with rice and wheat. Similar analysis, for pulses, is done for area, yield and area under irrigation in Section 2.3, 2.4 and 2.5 respectively. Section 2.6 tries to decipher the probable reasons for stagnation in the pulses economy. Compound growth rates of production, area and yield are looked at in Section 2.7. Section 2.8 analyses one of the most important variables of the supply side of any food crop -- the per capita net availability. Comparison is made, in this section, between pulses and cereals. Section 2.9 concludes with some of the important observations of this chapter.

2. 1: Basic Information on Pulses in India

Pulses are an important crop in Indian agriculture. They are cultivated both in rabi and kharif seasons. In 2008-09, they contributed over 6 percent of total foodgrains production (as we will discuss in subsequent sections, this has come down drastically over the years) and had about 18 percent of the total area under foodgrains. India is the leading producer of pulses in the world and contributed about 25 percent of the world production in 2008 (Agricultural Statistics at a Glance 2010).

Pulses, in India, are grown mostly under rainfed conditions. Hence they are grown primarily in the dry lands of the Deccan Plateau, the Central Highlands and parts of western and north-western India. In 2008-09, the first three producers were Madhya Pradesh (25% of total produce), Uttar Pradesh (13.73%) and Rajasthan (12.56%) and between them, they accounted for over 50 percent of the total production of 14.57 million tonnes (Agricultural Statistics at a Glance 2010).

Gram and arhar (tur) are the two important pulse crops cultivated in India. Table 2.1 compares the production and area of gram and tur between 1990-91 and 2008-09.

Table 2.1

Crop	Area-Million hectares				Production- Million Tonnes			
	1990-91		2008-09		1990-91		2008-09	
	Area	% Share	Production	% Share	Area	% Share	Production	% Share
Gram	7.52	30.49	5.36	37.59	7.89	35.72	7.06	48.46
Arhar	3.63	14.72	2.13	14.94	3.38	15.30	2.27	15.58
All Pulses	24.66	100.00	14.26	100.00	22.09	100.00	14.57	100.00

Source: Calculated from Agricultural Statistics at a Glance 2010

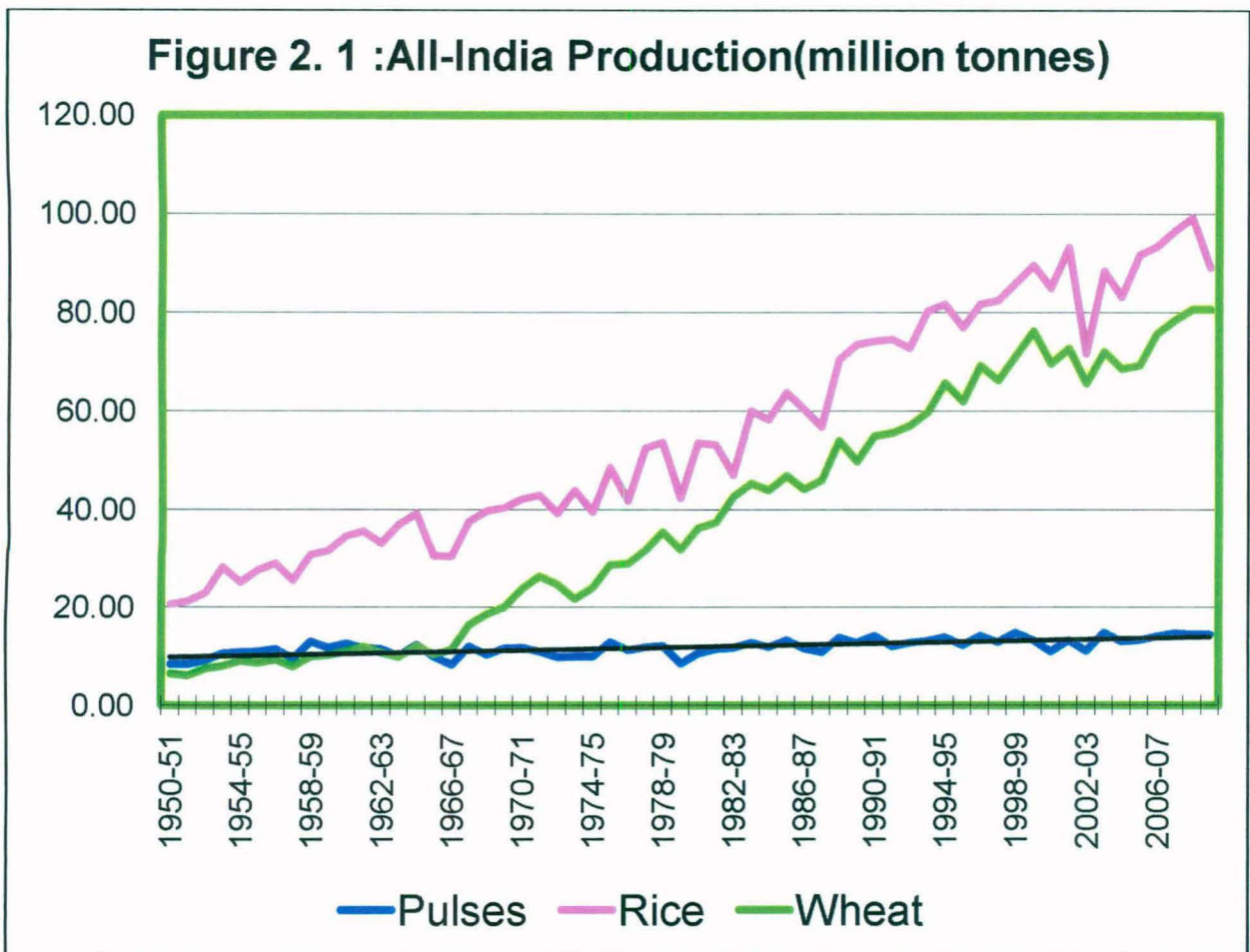
Gram is the most important pulse crop in India. It had about 30 percent share in area under pulses in 1990-91 which increased to over 35 percent in 2008-09. Also its contribution in production was about 37.5 percent in 1991 which increased to 48.5 percent in 2008-09. The contribution of arhar was close to 15 percent in both area and production in 1990-91 and it increased marginally for both in 2008-09.

Other important pulses cultivated in India are urad, moong and masur. Both urad and moong contribute around 10 percent (each) to total production and have about 13 percent (each) of pulses area under them. Share of moong is around 6 percent in both area and production. Besides these pulses, kulthi, pea, khesari, moth etc. are also grown in lesser quantities, each having less than 5 percent share in area and production.

Gram, masur, peas are grown in the rabi season while arhar, moong, urad, moth, kulthi are grown in kharif season. In 2008-09, rabi pulses accounted for 68 percent of the total production while the remaining 32 percent was accounted by kharif pulses.

2.2 : Production of Pulses (in comparison with Rice and Wheat)

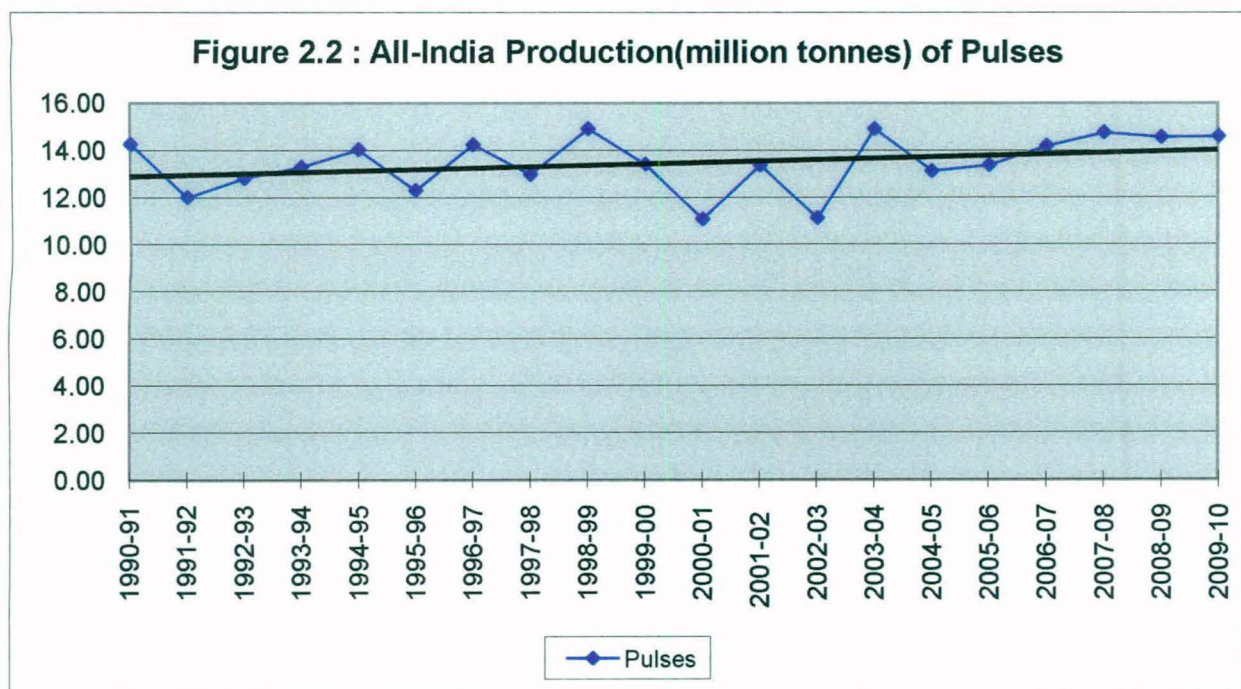
The production of pulses has lagged behind that of rice and wheat over the six decades since independence and the divergence is increasing over time. Rice has been on an uptrend since 1950-51 and wheat has picked up after the Green Revolution period of the mid-1960s as can be seen from Figure 2.1. Unfortunately, pulses have almost stagnated throughout as can be seen from the black trend line which is almost flat.



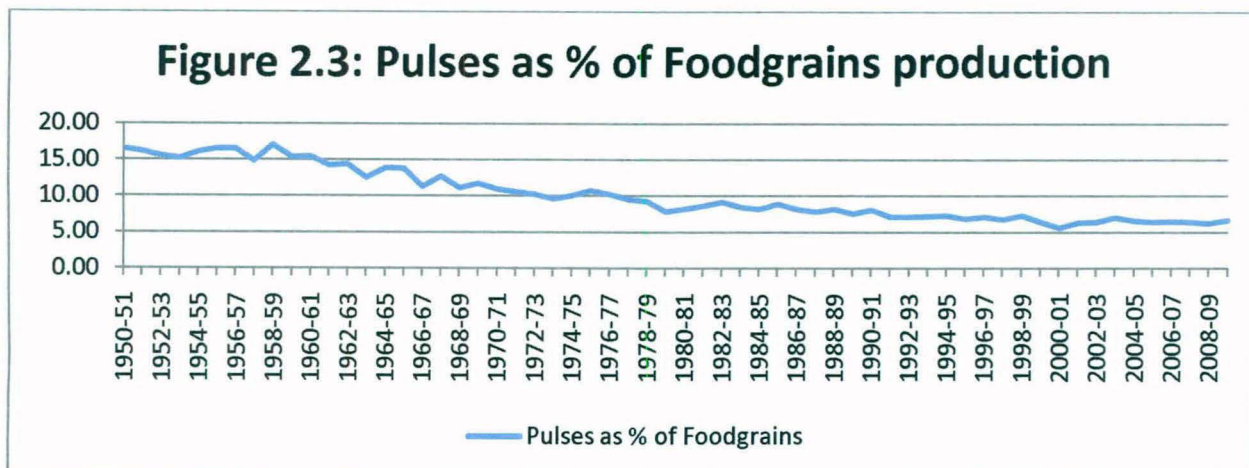
(Source of data: Agricultural Statistics at a Glance 2010)

The production of pulses was 8.41 million tonnes in 1950-51 and has increased to only about 14.5 million tonnes in 2008-09. During this period, the production of rice increased from 20.58 million tonnes to 99.18 million tonnes and that of wheat increased from just 6.46 million tonnes to 80.68 million tonnes (analysis of growth rates have been done later in the chapter).

Considering the period since the 1990s, the story is no better although the situation seems to have improved in the new millennium. Production has been fluctuating around 13.5 million tonnes but since 2006-07, production has been over 14 million tonnes as can be seen in Figure 2.2. We can better understand the reasons for this after we look at other crucial factors explaining production like area, productivity levels, irrigated area etc.



(Source of data: Agricultural Statistics at a Glance 2010)

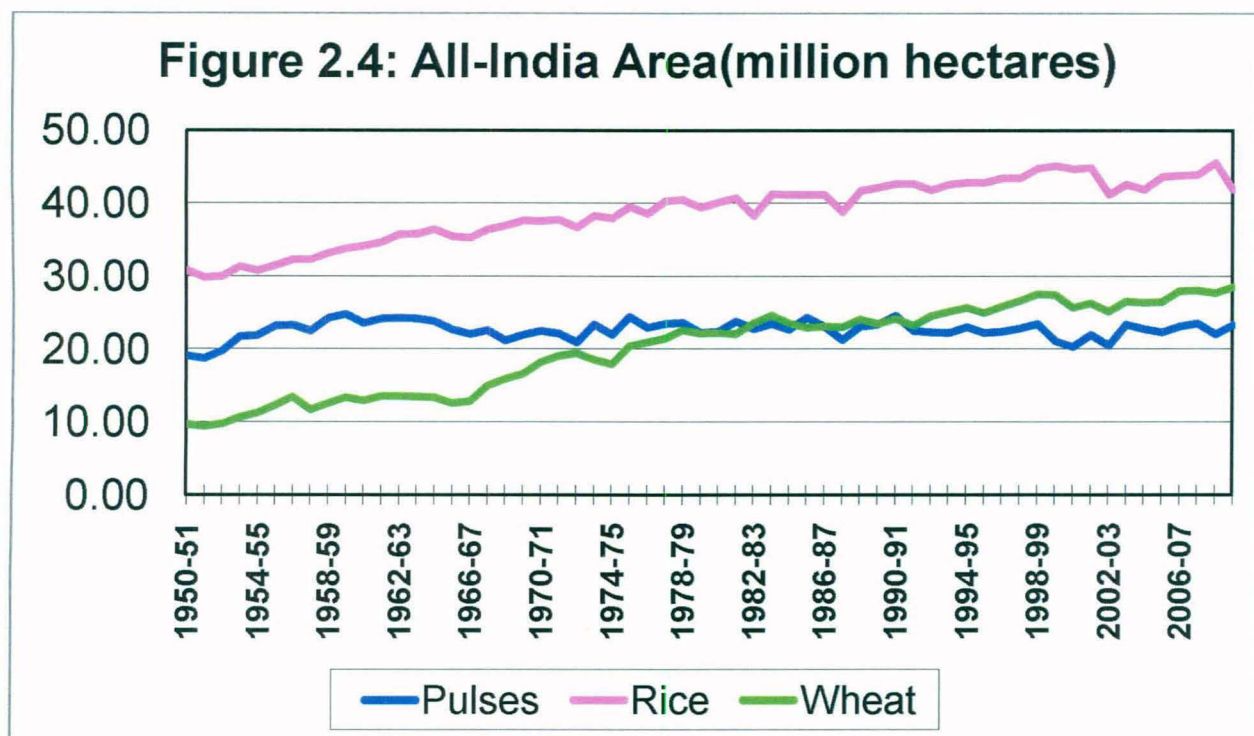


(Source of data: Agricultural Statistics at a Glance 2010)

As a percentage of total production of foodgrains, the share has declined considerably. From over 16 percent in 1950-51 it halved to 8 percent in 1990-91 and has further declined to 6.21 percent in 2008-09 as can be seen in Figure 2.3. This is no surprise as over the years foodgrains production has increased much more than pulses especially due to good performance on rice and wheat front.

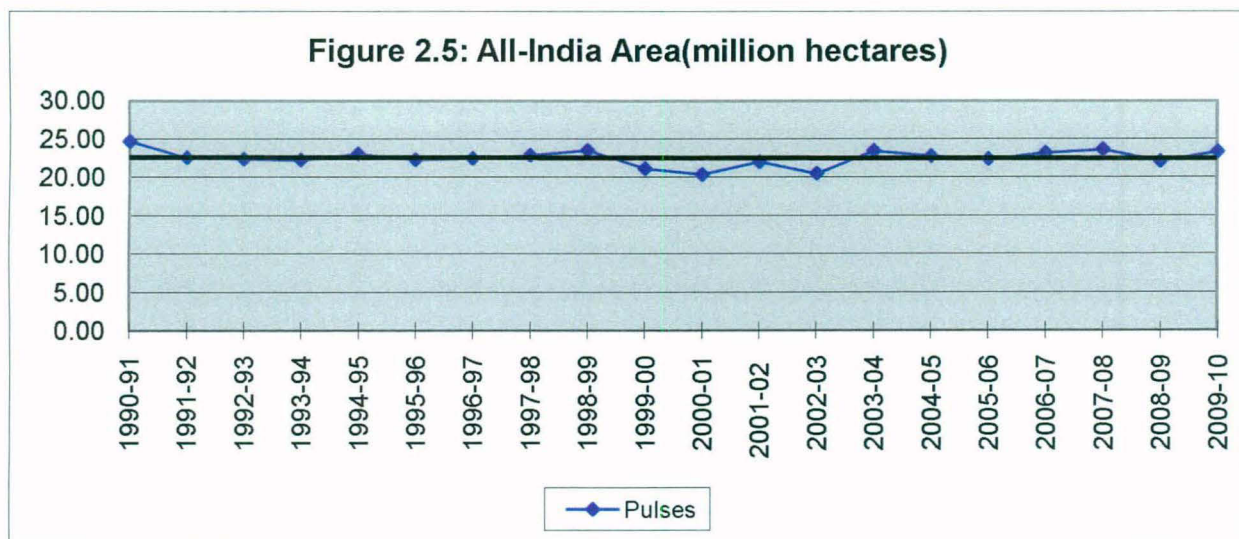
2.3: Area under Pulses (in comparison with Rice and Wheat)

As can be seen in Figure 2.4, after an increase in the 1950s there was decline in the area under pulses in the 1960s, due to increase in area coming under wheat during the initial years of the green revolution. Ryan and Ashokan (1977) argue that among the six major wheat growing states namely Punjab, Haryana, Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh, 22 percent of the area shift occurred at the expense of pulses in the 10 years after 1964-65 (Tuteja 2008, pg 7). Acharya (1993) believes that area under pulses, especially, rabi pulses, suffered a lot during the green revolution period. Area shifted to wheat from rabi pulses and to paddy from kharif pulses.



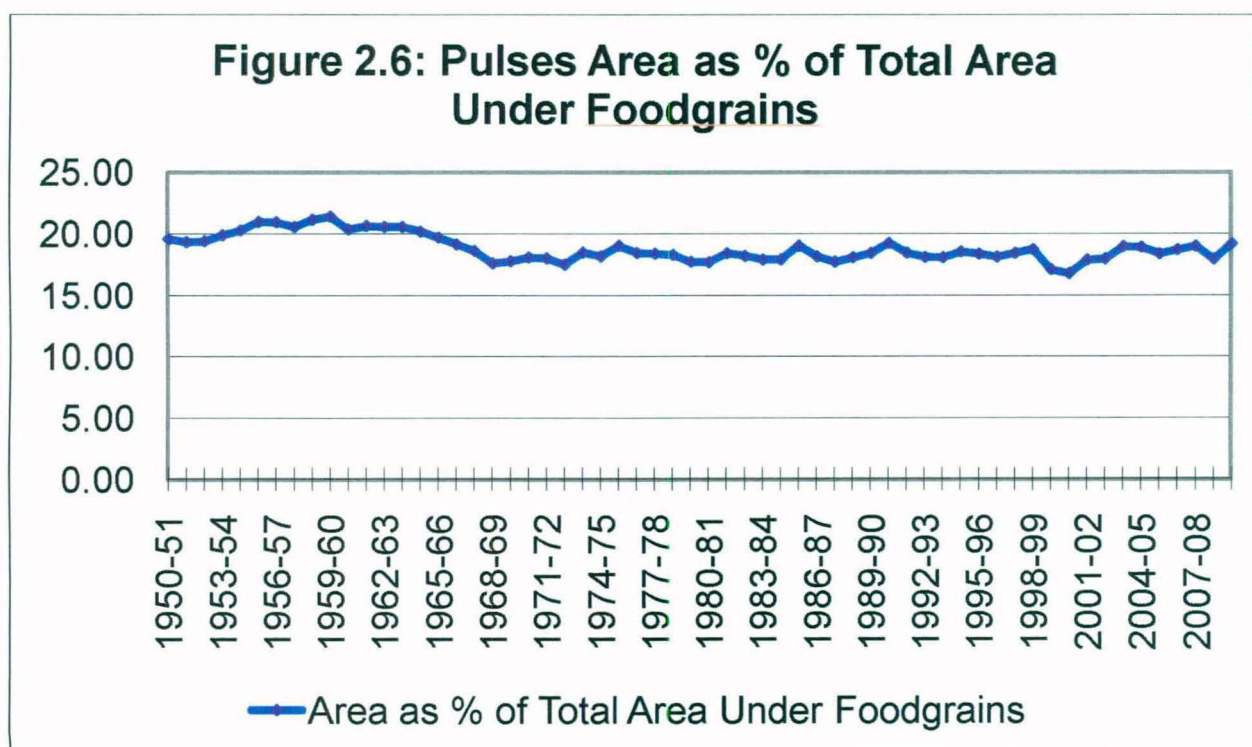
(Source of data: Agricultural Statistics at a Glance 2010)

Stagnation in area under pulses since the 1990s can be better seen in Figure 2.5, as the black trend line is almost flat at around 23 million hectares.



(Source of data: Agricultural Statistics at a Glance 2010)

As a percentage of total area under foodgrains, the situation seems less worse. After an increase in the 1950s and decline in 1960s there seems to be an arrest. Area under pulses was around 20 percent of the total area under foodgrains in 1950-51. Since then it has been hovering around 18 percent mark for quite some time. However, it is inching towards 20 percent again in the last few years as can be seen in Figure 2.6. The basic reason for this is that the area under foodgrains has also stagnated for many years now at around 120 million hectares. Thus both the numerator and denominator in this case have not been able to increase much. The arrest of area under pulses is one of the most boasted success of government programmes for pulses which argue that the situation would have been worse without intervention.

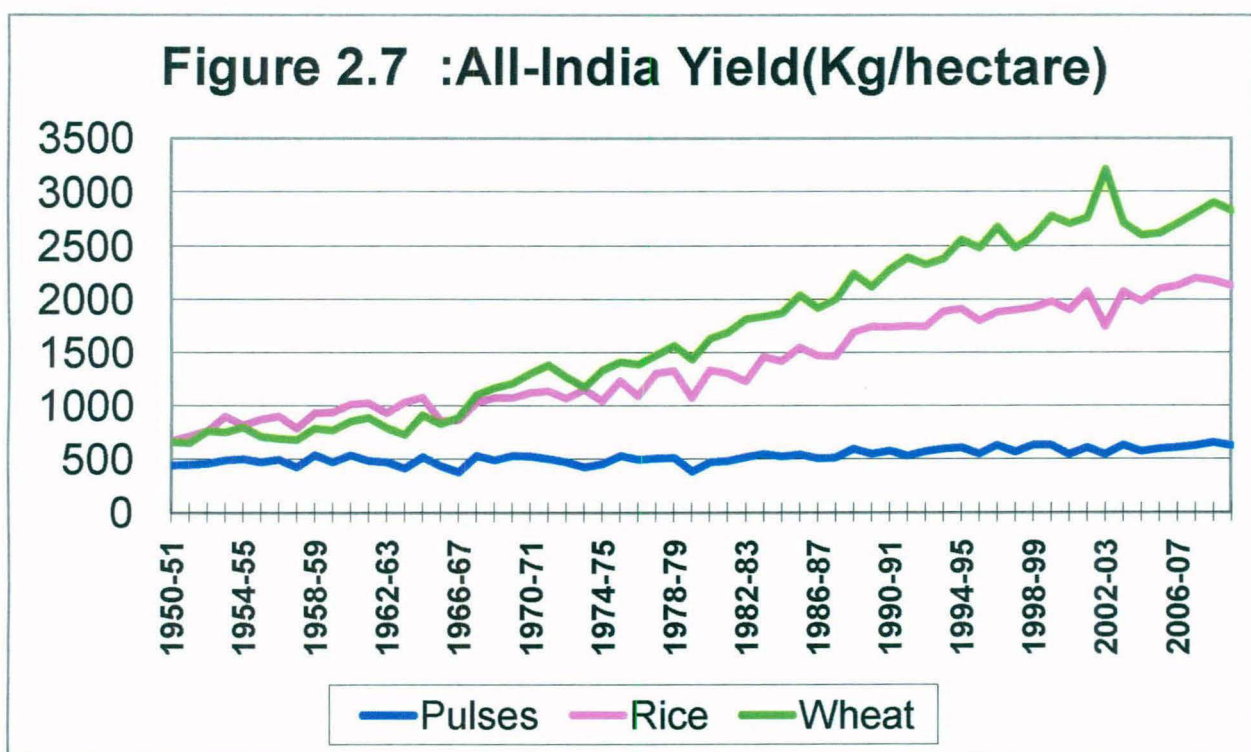


(Source of data: Agricultural Statistics at a Glance 2010)

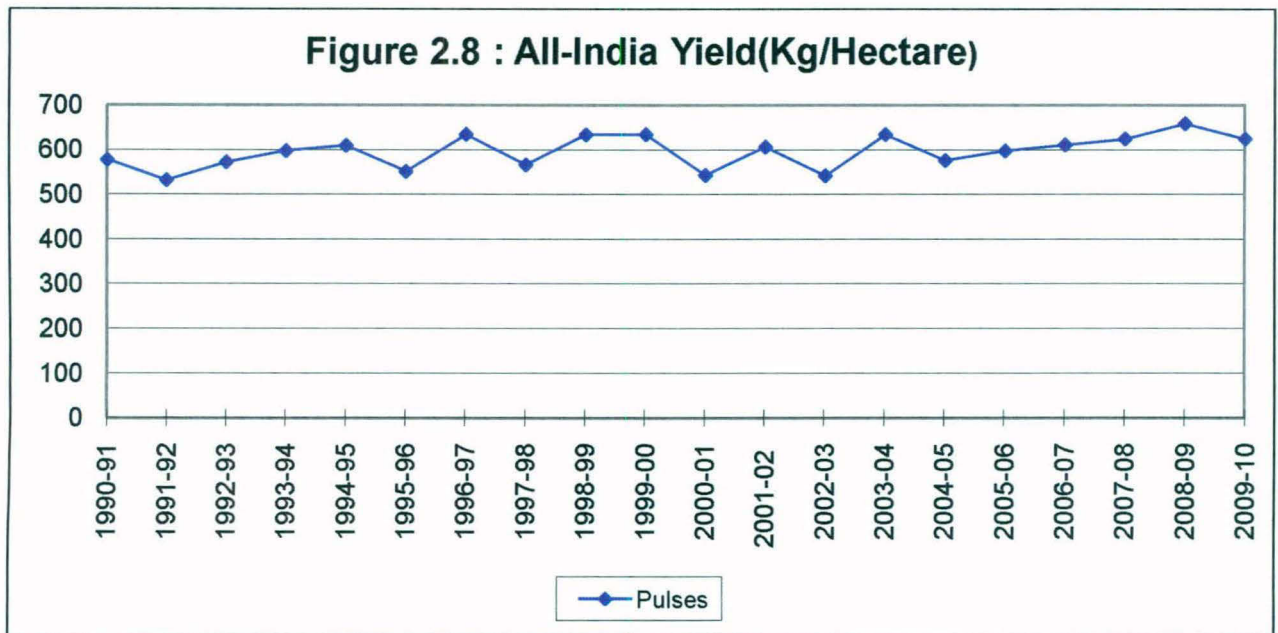


2.4: Yield of Pulses (in comparison with Rice and Wheat)

Yield levels in pulses show the real reason for the bad condition of pulse production. For over four decades from the 1950s, yield levels in pulses have been crawling over the 500 kg/hectare line as can be seen in Figure 2.7. In comparison to pulses, rice and wheat show a much better performance with productivity levels in wheat surpassing that of rice during and after the Green Revolution period. The divergence has been growing over time. The primary reason for this has been, unlike rice and wheat, the lack of any major technological breakthrough in the pulses sector. Both rice and wheat have seen very many HYV (high yielding varieties) seeds during this period and the resultant increase in their productivity levels is clearly visible.



(Source of data: Agricultural Statistics at a Glance 2010)

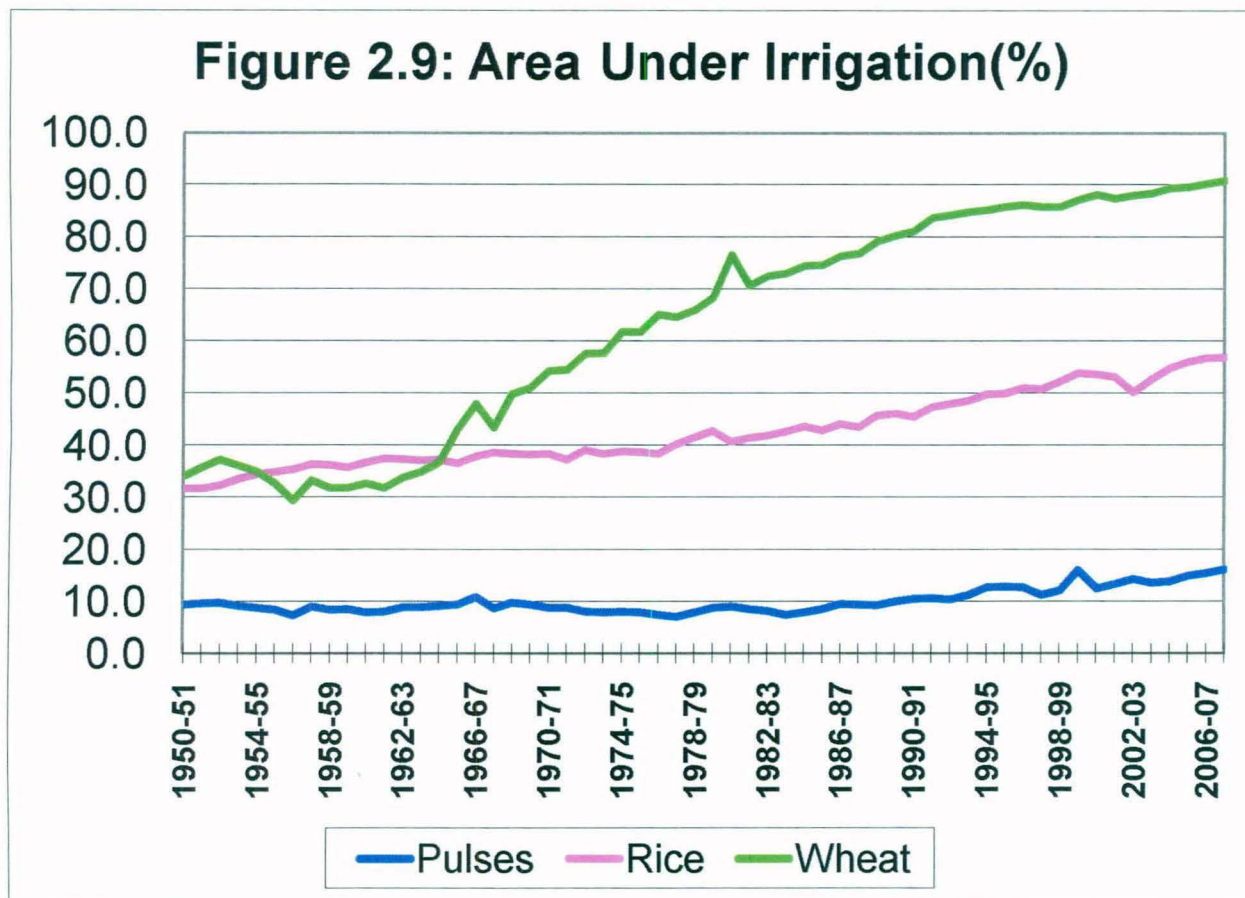


(Source of data: Agricultural Statistics at a Glance 2010)

Though there has been some improvement over the 1990s, yield levels of 625-650 kg/hectare in India are nowhere compared to that in other major pulses producing countries. For e.g. yield levels in France (4146 kg/ha), USA (1803 kg/ha), China (1507 kg/ha), Canada (1506 kg/ha), Argentina (1237kg/ha) were much higher in 2003 (FAO Production Yearbook, 2003).

2.5 : Area under irrigation in Pulses (in comparison with Rice and Wheat)

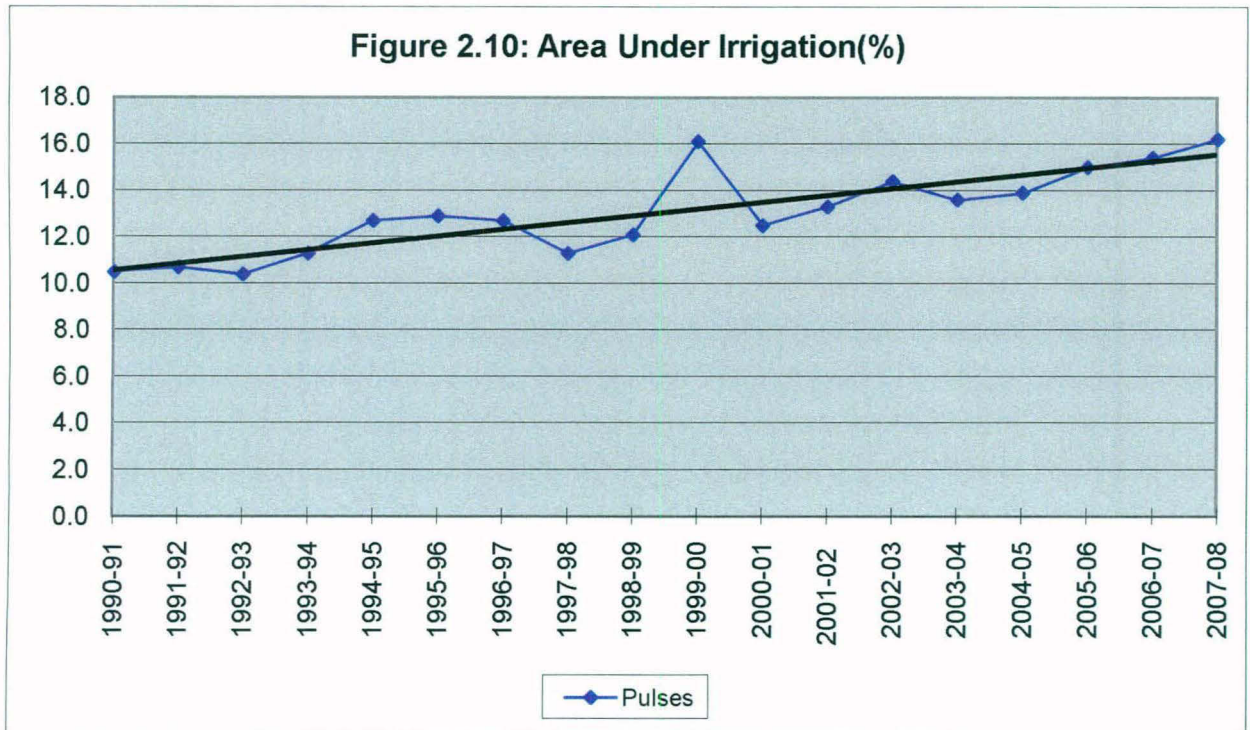
Irrigated area under pulses is nowhere near the levels of wheat and rice. In 1950-51, only 9.4 percent of the area under pulses was irrigated compared to over 30 percent for rice and wheat. Irrigated area under wheat skyrocketed during and after the Green Revolution period surpassing rice by a big margin.



(Source of data: Agricultural Statistics at a Glance 2010)

For pulses, four decades since 1950-51 saw the figure hover around 8-9 percent level. This stagnation is probably due to two factors. Firstly, there was slow progress in extending irrigation facilities to the rainfed areas and secondly the shift from pulses to superior cereals (and sometimes oilseeds) which has been witnessed in areas where irrigation was made available.

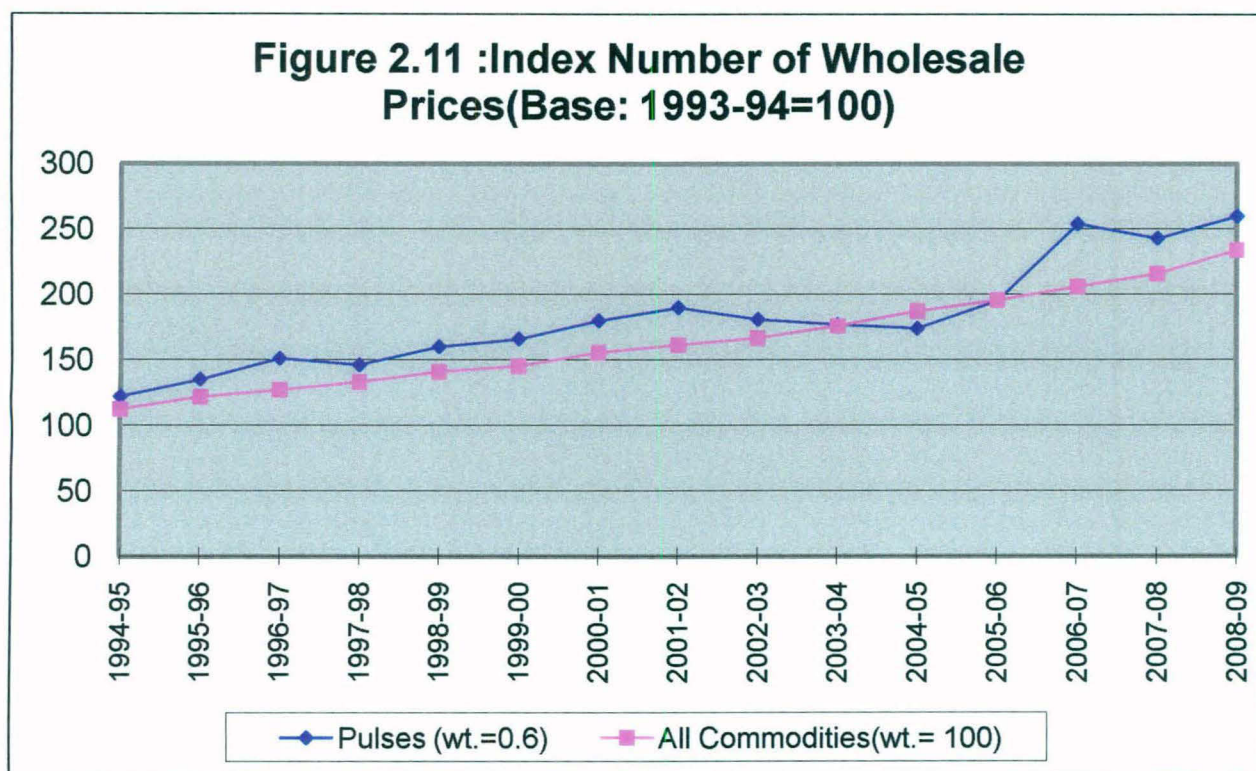
Situation has improved since 1989-90 and we see a clear uptrend in the area under irrigation. Irrigated area under pulses has increased to over 16 percent in 2007-08 (This should have surely contributed to the better performance in terms of increasing productivity and production we noted earlier). This can be better seen in Figure 2.10.



(Source of data: Agricultural Statistics at a Glance 2010)

2.6: Probable reasons for the stagnation in the pulses economy

Having discussed some of the crucial factors which affect production we now try to analyse the reasons for such a sorry state of affairs. There is no doubt that the supply side of the pulses economy of India is not being able to break out of a low level equilibrium trap it has got into. Even the price mechanism has not been able to incentivize the pulses growers as has been in the case of rice and wheat. Figure 2.11 shows that the wholesale price index for pulses (weight 0.6) has remained above that of all commodities index for most of the period since 1994-95. Assuming higher wholesale prices have a positive influence on the farm gate prices, this should have incentivized the pulse growers.



(Source of data: Economic Survey 2009-10)

Literature on pulses production offers many explanations for this paradox. There are other pressing problems which offer greater disincentives to the farmers growing pulses. Firstly, pulses are rainfed in most of the areas where they are grown and generally very poor quality land is allocated for its cultivation. This naturally leads to lower productivity as we have seen in Section 2.4.

Secondly, whenever irrigation is made available to pulses farmers, most prefer to switch to other crops which give more returns under favourable conditions. M.V.Nadkarni notes that “..whenever a farmer is faced with a choice between superior cereals and these ‘backward’ crops, he would prefer the latter under adverse conditions where they are less risky and the former under favourable conditions when risk is reduced or eliminated, since the yields of superior cereals under favourable conditions are much higher..” (‘Backward crops’ in

Indian Agriculture: Economy of Coarse Cereals and Pulses, 1986). Thus according to him the 'inherent constraint' is the "...lower responsiveness to the availability of more favourable conditions of higher rainfall or irrigation under available technology."

Thirdly, farmers growing pulses also lack institutional support which is available to wheat and rice growers. The fact that government procures wheat and rice in considerable amounts is a big insurance to their growers. This is not available to pulse cultivators as pulses procurement (which is done by National Agricultural Cooperative Marketing Federation of India Ltd also known as NAFED) is more of an exception than a rule and thus the minimum support prices (MSPs) declared by the government serves no purpose. Usha Tuteja argues that "unlike wheat and rice growers, who have a ready market in government procurement and that too at higher than market prices, pulse growers are left with no market support. The minimum support price announced and hiked annually are notional and have become irrelevant because pulses are neither procured nor market prices reaches that level" (India's Pulse Production, 2008).

Fourthly, lack of any major genetic breakthrough in this sector has also been a crucial factor. Wheat and rice have done very well on this count. This has prevented any quantum jump in productivity levels.

Fifthly, government policies and programmes have not been as effective as they have been in the case of rice and wheat. An analysis of government programmes gives a feeling of neglect as far as this crop is concerned. For almost one and a half decades after independence, there were no specific schemes for this sector. Even for the next three decades programmes like All-India Coordinated Pulse Research Project (AICPRP) and Pulses Development Scheme did not yield the desired

results. Subsequently, seeing the good results in oilseeds, pulses were brought under Technology Mission in 1990 and the National Pulses Development Project (NPDP) was launched under it with focus on area expansion and yield improvement. But as we have observed in the sections above and also as the discussion on compound growth rates in subsequent section will show that there was not much impact of such schemes. Sathe & Agarwal (2004) observe that “the National Pulses Development Project, launched in 1991, was a half-hearted attempt and did not lead to the expected results...”.

Schemes since then seems to have made some impact as can be seen from the recovery since 2004-05. NPDP and some other schemes were merged in the Tenth Five Year Plan into one centrally sponsored scheme called Integrated Scheme of Oilseeds, Pulses, Oil palm and Maize (ISOPOM) being implemented from April 2004. From April 2010, pulses have been included under National Food Security Mission (NFSM) which among other objectives strives to increase the production of pulses by 2 million tonnes by the end of Eleventh Five Year Plan. Also from 2010-11, a new programme under NFSM called Accelerated Pulses Production Programme (A3P) has been launched in which one million hectares of potential pulses area has been taken for large scale demonstration of technology in 1000 compact blocks. Also in the Union Budget 2010-11, an amount of Rs. 300 crore has been provided for promoting dry-land farming in 60,000 pulses and oilseeds villages in rain fed areas.

Other factors like susceptibility to pests and diseases, lack of certified seeds, monopsonistic behavior of mill owners etc. are other reasons in the literature which explains the stagnation in supply of this sector.

2.7: Compound Growth Rates of Production, Area and Yield

The growth rates of area and yield are the main determinants of the growth rate of production. Compound growth rates of cereals and pulses are given in Table 2.2 for the period 1949-50 to 2006-07.

Table 2.2: Compound Growth Rates (1949-50 to 2006-07) (Base: T.E. 1981-82=100) (% per annum)

Crop	Area	Production	Yield
Rice	0.68	2.54	1.85
Wheat	1.91	4.88	2.91
Total Cereals	0.33	2.7	2
Pulses	0.08	0.54	0.49
Total Foodgrains	0.28	2.35	1.75

Source: Tuteja (2008); Original Source: Agricultural Statistics at a Glance 2007

As can be seen from the table, the compound growth rate of area and yield has been very low for pulses as compared to rice and wheat. Growth rate in area has been almost negligible. These two explain why the growth rate of production has been so low, only 0.54 percent as compared to 4.88 percent in the case of wheat and 2.54 percent in the case of rice.

Table 2.3: Compound growth Rates of Area (A), Production (P) and Yield (Y) since 1990s (Base: T.E.1981-82=100)

Crop	(% per annum)					
	1990-91 to 1999- 2000			2000-01 to 2009-10		
	A	P	Y	A	P	Y
Rice	0.68	2.02	1.34	-0.03	1.59	1.61
Wheat	1.72	3.57	1.83	1.21	1.89	0.68
Total Pulses	-0.60	0.59	0.93	1.17	2.61	1.64

Source:Agricultural Statistics at a Glance,2009-10

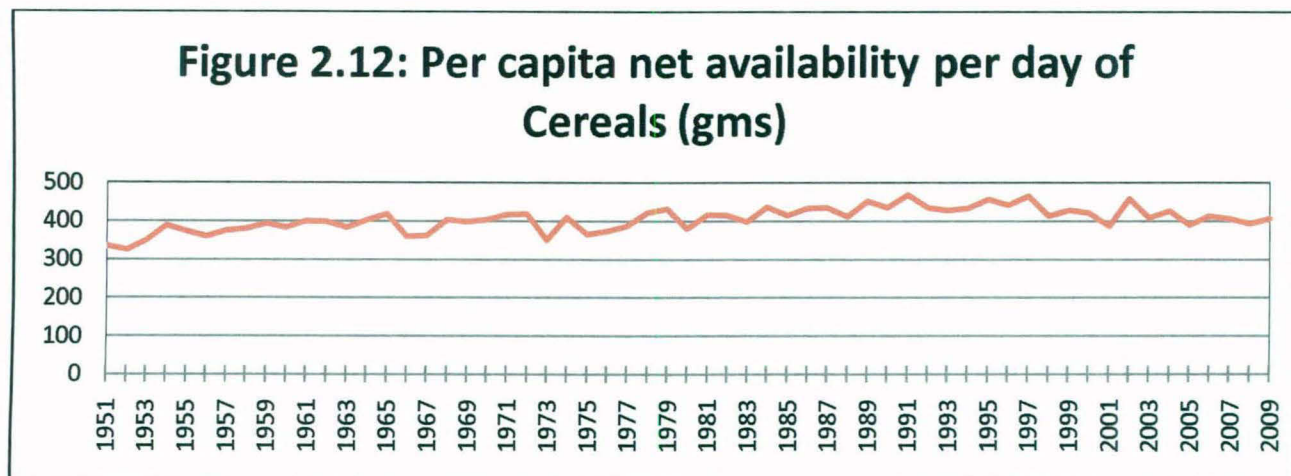
The story since 1990s can be divided into two parts each covering a decade since then. In the first part from 1990 to 2000 situation has been quite bad for pulses. Compound growth rate of area under pulses was negative (-0.60%) under this period. Yield increase was below one percent per annum and as a result production increased by just over half a percent. This also shows that the inclusion of pulses under the Technology Mission in 1990-91 showed no visible result in the first decade.

However the period since then has been impressive. Between 2000 and 2010, the compound growth rate in area and yield were 1.17 percent and 1.64 percent respectively. As a result, production grew at 2.61 percent per annum in this period much higher than that of rice and wheat. The efforts of the government in this period such as ISOPOM, inclusion of pulses in National Food Security Mission (NFSM) etc. and maybe also the lagged effect of schemes of the earlier period have yielded good results.

2.8: Per capita net availability of total Pulses (in comparison to total cereals)

The per capita net availability gives us a rough indication of the available supply. Care should be taken in interpreting this as this is not the actual consumption in the economy as it does not take into account the changes in stocks in possessions of the producers, consumers and traders (In the next chapter, we will be analyzing this in much greater detail). The per capita net availability is arrived at by subtracting exports and 'seed, feed and wastage' from total production and by adding

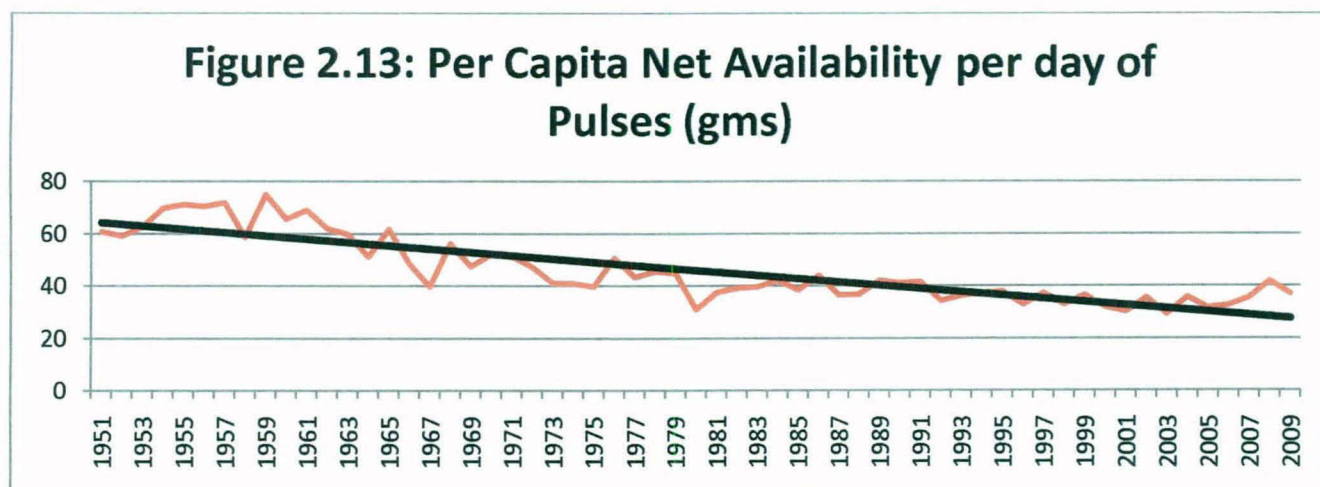
'imports' and suitably adjusting (+/-) change in stocks. Figure 2.12 gives the per capita net availability per day since 1950-51 for cereals.



(Source of data: Agricultural Statistics at a Glance 2010)

The per capita net availability per day for cereals was 334.2 gms in 1951. By 1991, riding on the robust increase in rice and wheat it reached 468.5 gms. However, it fell to 407 gms in 2009.

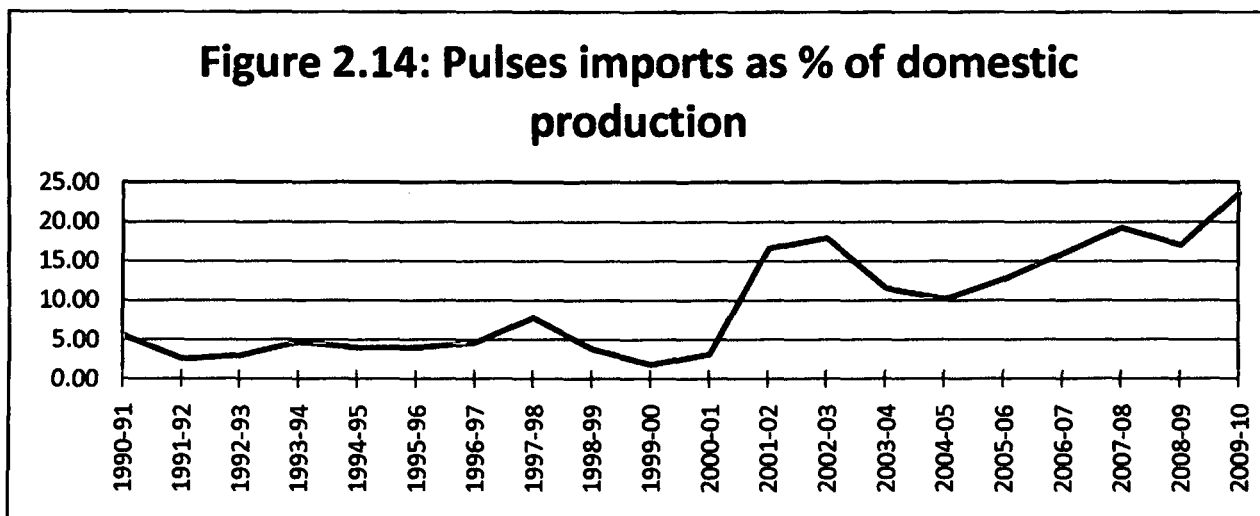
The per capita net availability of pulses presents a very sorry picture when compared to that of cereals. Figure 2.13 shows the values since 1951.



(Source of data: Agricultural Statistics at a Glance 2010)

There is a clear steep decline in the per capita per day net availability of pulses in India as can be seen from the black trend line. From 60.7 gms in 1951 it increased to 74.9 gms in 1959. Thereafter there has been a steep decline with the figure reaching 41.6 gms in 1991. The fall continued, with it reaching 29.1 gms in 2003. There has been a little improvement since then. In 2009 it was 37 gms. Thus if we consider the period from 1959 to 2009, over this fifty years, the per capita net availability per day has halved raising serious questions for the food and nutritional security as far as the contribution of pulses is concerned in the country. According to Indian Council of Medical Research (ICMR), the requirement of pulses as per physiological needs is 43 gms/day per capita though the Planning Commission has scaled it down to 40 gms/day per capita considering the increasing intake of other dietary proteins (Tuteja, 2008, Pg 30). This issue is analysed in much greater detail in the chapter 4 where protein intake levels of different expenditure groups have been considered.

The reason for such a steep decline in the per capita net availability per day is just a matter of arithmetic. As we have seen before, production has been stagnant over most of the period while population has been increasing in leaps and bounds. Also, imports have been inadequate to compensate for a fall in domestic production. Only since 2001-02 have imports been significant as a percentage of domestic production and have been rising significantly in the recent past as shown in Figure 2.14. The influence of this has also been positive on the per capita net availability of pulses in the last few years.



(Source of data: Agricultural Statistics at a Glance 2010)

2.9: Important observations

In this section we summarize the important observations of the previous sections. We have seen that the production of pulses has stagnated for most of the period since independence. As a proportion of foodgrains production, the production of pulses have fallen by more than half, from over 16 percent in 1951 to around 6 percent in 2008-09.

Acreage under pulses witnessed an increase in the initial years after independence but since the green revolution period of the mid-1960s there has been decline and stagnation. This stagnation continues in the period after 1990-91 also. However since the area under foodgrains has also stagnated, as a proportion of area under foodgrains the area under pulses has hovered around 18-19 percent for most of the period.

As compared to rice and wheat, yield levels have remained abysmally low due to absence of any major technological breakthrough.

Also, the productivity levels in other major pulses producing economies have been 2-3 times higher.

Irrigated area under pulses remained just around 10 percent for almost four decades since independence. It has picked up since 1989-90 and in 2007, 16 percent of the area under pulses was irrigated. However, this is nothing compared to the progress achieved under rice and wheat.

Some of the important reasons for the stagnation in the pulses economy are low and fluctuating yields due to rainfed cultivation and lack of HYV seeds, shift to other crops giving higher returns when irrigation becomes available, lack of institutional support from the government and poor impact of government programmes.

Over the period since independence, the compound growth rate of area under pulses has been negligible and has been very low for yield levels. These two together explain the low growth in production. However, there has been some improvement in the situation in the period from 2000-01 to 2009-10.

Why not change -
what factors
were contrib to this?

One figure that tells the whole story discussed so far is per capita net availability. The per capita net availability per day of pulses has halved between 1959 (74.9 gms) and 2009 (37 gms). Thus in recent times this has gone below that required to meet the physiological norms of pulses.

Thus the supply side of the pulses economy presents a picture of utter neglect and stagnation. The situation is alarming to say the least. With this overview of the supply side in mind, in the next chapter, we look at the demand side of the pulses economy.

CHAPTER 3

THE PULSES ECONOMY OF INDIA (1993-94 to 2004-05) — A DEMAND SIDE ANALYSIS

Pulses have been an integral part of the Indian diet. It has been the most important side dish with 'roti' (wheat bread) and 'chawal' (rice) throughout the length and breadth of the country.

This chapter considers the demand side of the pulses economy in India. The objective of this chapter is to analyse the levels and patterns of consumption of various pulses between the period 1993-94 and 2004-05. A comparison with cereals has been done for better understanding of the changing consumption pattern. The analysis of this chapter will have important bearing on the next chapter where we analyse the level and pattern of protein intake over the period of our study.

For analysing the consumption trends and patterns of different pulses (and its comparison with different cereals), I have used the National Sample Survey Organisation (NSSO) data pertaining to the quinquennial rounds of the post-liberalisation period. Here data on consumer expenditure for 50th Round (1993-94) and 61st Round (2004-05) are analysed. Both rural and urban sectors are covered and most of the states (covering more than 95 percent of the population according to 2001 Census) have been incorporated in the analysis.

Literature is very thin in the area of analysis of pulses consumption in India and this is a modest attempt to do the same. The 12 monthly per capita expenditure classes which form the basis of presentation of consumer expenditure data in NSSO reports have been bundled into the bottom 30, middle 40 and upper 30 expenditure classes. This will give greater insights into the differences in the levels and pattern of consumption of different income groups. To the best of my knowledge, this type of analysis of pulses consumption has not been done and it can be a useful method of further research in this area.

It is important to note at this point that this study is concerned with the trends in the consumption of pulses (and cereals). Analysis of the factors behind each change observed is beyond the scope of this dissertation. Thus this chapter majorly analyses 'what happened' and not 'why it happened'. The latter can be a subject matter of further research. However, wherever possible, plausible explanations have been attempted.

In Section 3.1 some basic concepts relating to the grouping of NSSO data are discussed. Section 3.2 discusses the methodology adopted. It informs about the states taken for analysis and the method of formation of the three percentile expenditure groups.

Section 3.3, 3.4 and 3.5 sets the stage with the analysis of consumption pattern of rice, wheat and total cereals. Subsequently, Sections 3.6 to 3.15 analyses the levels and changing patterns of various pulses.

In Section 3.16 an attempt has been made to analyse the possible reasons behind the pattern observed. Section 3.17 concludes with some important observations of this chapter.

3.1 : Some concepts - MPCE and MPCE Classes

The NSSO data provides information on the monthly per capita consumer expenditure (MPCE) in rupees and arranges the population into 12 MPCE classes for both rural and urban areas. These classes are so constructed such that, for both rural and urban India, the bottom two and the upper two classes contain 5 percent of the population each while the remaining eight classes contain 10 percent of the population each.

The different classes constructed in the survey for both rural and urban India for both the rounds are presented in Table 3.1.1.

Table 3.1.1: MPCE Classes (Rs.)

Class	50th Round (1993-94)		61st Round (2004-05)	
	Rural	Urban	Rural	Urban
1	0-120	0-160	0-235	0-335
2	120-140	160-190	235-270	335-395
3	140-165	190-230	270-320	395-485
4	165-190	230-265	320-365	485-580
5	190-210	265-310	365-410	580-675
6	210-235	310-355	410-455	675-790
7	235-265	355-410	455-510	790-930
8	265-300	410-490	510-580	930-1100
9	300-355	490-605	580-690	1100-1380
10	355-455	605-825	690-890	1380-1880
11	455-560	825-1055	890-1155	1885-2540
12	560 & Above	1055 & Above	1155 & Above	2540 & Above

Source: NSSO 50th Round Report 402, 61st Round Report 508

As is clear from the table, MPCE classes are higher for urban than rural India due to higher average per capita income levels there. Also for both rural and urban sectors, the values of MPCE classes have increased over the two periods. All data in NSSO surveys are classified according to these classes.

3.2 : Methodology

The study analyses the data on physical consumption of pulses. To avoid value judgments on the deflator used in comparing data across time at constant prices, I have used physical quantities rather than value of expenditure. This will also be useful in looking at the nutritional aspect in the next chapter.

Seventeen major states of India having population of more than 20 million according to 2001 Census are taken for analysis. They are Andhra Pradesh, Assam, Bihar, Jharkhand, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Chhattisgarh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. Also, the state of Uttarakhand has been included as it was part of Uttar Pradesh before its formation for comparability between the two rounds. Taken together these states constitute more than 95 percent of the population according to 2001 Census.

I have aggregated the 12 MPCE classes such that the first four classes forms the bottom 30 percentile expenditure class, the next four form the middle 40 percentile expenditure class and the upper four the upper 30 percentile expenditure class of the population. This will help provide a better understanding of the consumption pattern in the

different consumer expenditure groups. The consumption figures of the three groups have been arrived at by the weighted average method. The weights have been taken as persons per thousand in that class. Also, for the 61st Round, Jharkhand has been merged with Bihar, Chhattisgarh with Madhya Pradesh and Uttarakhand with Uttar Pradesh, using their estimated populations as weights, to facilitate comparison of the two rounds since these states were not divided then. Figures for rural and urban sectors have not been clubbed but dealt with separately because consumption patterns are very different in the two areas.

Before we begin with the analysis of consumption of different pulses, let us take a look at the consumption pattern of rice, wheat and total of all cereals. This will set the stage for the analysis of pulses in subsequent sections.

3.3: Consumption of Rice

Rice is one of the two most important cereals in India, the other being wheat. It is consumed mostly in the coastal states of our country. The states with a high consumption of rice are Orissa, West Bengal, Assam, Andhra Pradesh, Kerala and Tamil Nadu.

3.3.1: Rural Consumption of Rice

In 1993-94, the all-India monthly per capita average (henceforth the average) consumption was 7.02 kg . For the bottom 30, middle 40 and upper 30 percentile income groups it was 6.08 kg, 7.54 kg and 7.3 kg respectively. In 2004-05, the all-India average came down to 6.549

kg. It increased for the bottom 30 percentile income group to 6.269 kg while it fell for the other two (Appendix Table 3.81).

Consumption levels of the three income groups are very close to each other. This shows the 'necessary good' character of the same. It also shows that income elasticity of the good is less than one. Thus consumption plateaus off after a certain level and even falls sometimes (Appendix Table 3.82, 3.83).

Over the period of study, there has been a fall in consumption of rice in most states except Gujarat and to some extent Uttar Pradesh (both of which are states where wheat is the major cereal). Also the bottom 30 percentile expenditure group of most states shows a rise in consumption, with the all-India average being 3.11 percent (Appendix Table 3.84). This can be attributed to the public distribution system helping in increasing the consumption of the poorer sections.

3.3.2: Urban Consumption of Rice

The urban consumption of rice was lower than that in rural areas in both rounds. In 1993-94, the all-India average monthly per capita consumption was 5.28 kg which fell to 4.853 kg in 2004-05. Consumption levels of the bottom 30, middle 40 and upper 30 percentile expenditure groups were very close to their mean values showing the trend as seen in the previous section (Appendix Tables 3.85, 3.86, 3.87).

Over the two rounds, most states showed a fall in consumption as seen in the rural areas. However, even the bottom 30 percentile income group posted a negative change over this period, although almost half the states did see an increase in consumption for this

section. For the middle 40 and the upper 30 income groups the fall was across majority of states (Appendix Table 3.88).

3.4: Consumption of Wheat

Wheat forms the second important cereal consumed in India. The states with a predominantly high consumption of wheat include Punjab, Haryana, Rajasthan, Gujarat, Madhya Pradesh, Bihar and Uttar Pradesh.

3.4.1: Rural Consumption of Wheat

In 1993-94, the all-India average consumption of wheat was 4.4 kg. It was 3.38 kg, 4.16 kg and 5.73 kg for the bottom 30, middle 40 and the upper 30 percentile expenditure groups. In 2004-05 the all-India average came down to 4.293 kg. It was 3.513 kg, 4.349 kg and 5.058 kg for the three expenditure groups (Appendix Table 3.89).

Unlike in the case of rice, the consumption of wheat varies in the different expenditure groups. The average consumption of the bottom 30 percentile expenditure group was around 59 percent of the upper 30 percentile expenditure group in 1993-94. It improved by 10 percentage points in 2004-05 due to rise in numerator and a fall in the denominator (Appendix Table 3.90, 3.91).

Over the period, most states recorded a fall in the consumption of wheat except Andhra Pradesh, Karnataka, Maharashtra and Orissa. Also, the bottom 30 and the middle 40 percentile income groups of the majority of the states witnessed an increase which led to an average increase of 3.93 percent and 4.54 percent respectively. However

average consumption of upper 30 percentile income group witnessed a decline (Appendix Table 3.92).

3.4.2: Urban Consumption of Wheat

Unlike rice, the average consumption of wheat was higher in the urban areas except for the upper 30 percentile group.

In 1993-94, the all-India average consumption of wheat was 4.72 kg. It was 4.12 kg, 4.8 kg and 5.19 kg for the bottom 30, middle 40 and the upper 30 percentile expenditure groups respectively. In 2004-05, the all-India average came down to 4.646 kg. It was 4.465 kg, 4.737 kg and 4.707 kg for the three percentile groups (Appendix Table 3.93).

The consumption is more equal among the different expenditure classes in both rounds than in rural areas (Appendix 3.94, 3.95).

Over the two rounds, there has been a fall in the consumption in most states. However, for the bottom 30 percentile majority of the states show a rise in consumption which has led to the average increase by 8.37 percent (Appendix Table 3.96). Again such increases may be a consequence of the public distribution system.

or shift to higher food items?

3.5 : Consumption of Total Cereals

Total cereals include rice, wheat and other coarse cereals like jowar, bajra, ragi etc. Over the two rounds, there has been an across the states fall in its consumption both in the rural and in the urban areas. This is not only true for all-India average of all MPCE classes but also for the different percentile income groups. The fall is sharper in the rural areas than in the urban areas (Appendix Tables 3.97 to 3.104).

According to NSSO 61st round report on consumer expenditure this is primarily the result of diversification of the consumption basket. It notes, “Just as improvement in economic condition does not increase cereal consumption beyond a certain point, so, with economic development and diversification of the consumption basket over time, the choice appears to be in favour of a reduction of cereal consumption and an increase in consumption of other items such as the “beverages, refreshments and processed food” group. Among the partial explanations that may be put forward for the decline in cereal consumption are:

(a) Consumption of potato has increased.

(b) Eating out has increased. (Cereal content of meals taken outside at own cost or at public cost is hardly known.)

(c) Calorie needs may be declining because labour-saving devices are becoming increasingly available in the household, in the workplace, and in transportation” (NSSO 61st Round Report 508, Level and Pattern of Consumer Expenditure, pg 27).

With this analysis at the backdrop we look into the consumption levels and changing pattern of various pulses in the coming sections.

3.6: Consumption of Pulses and Pulse Products

‘Pulses and pulse products’ category in NSSO data give a rough estimate of the total consumption of pulses. Included here are arhar, gram (split gram), moong, masur, urad, khesari, peas, soyabean and ‘other pulses’. However pulses consumption from meals taken outside (e.g. at hotels, restaurants or other eating places such as dhabas) and at work place are not included due to problems in the estimation of actual ingredients in such foods. It is important to note here that data for

consumption of soyabean shows very less consumption as pulses, as most of it is recorded as consumption under edible oils (hence no separate analysis of soyabean is done).

Before beginning our analysis of the consumption of pulses it is important to be aware of the physiological requirement of pulses which is 43 gms/day per capita according to the Indian Council of Medical Research (ICMR). However, taking into consideration the growing diversity in the intake of other dietary proteins, the Planning Commission has pegged this at 40 gms/day per capita (Usha Tuteja, 2008, Pg 30). This translates to 1.2 kg per capita per month. This is the benchmark with which we will compare the actual physical consumption of total pulses.

3.6.1: Rural Consumption of Pulses and Pulse Products.

The all-India average monthly per capita consumption (the average) for all MPCE classes in rural India was 0.76 kg in 50th Round (1993-94). It was 0.54kg, 0.73 kg and 1.01 kg for the bottom 30 percentile, middle 40 percentile and upper 30 percentile group respectively. In rural India in the 61st Round (2004-05), the average fell to 0.674 kg. This was due to a fall in the consumption of bottom 30, middle 40 and upper 30 percentiles whose consumption stood at 0.503 kg, 0.661 kg and 0.876 kg respectively (Appendix Table 3.1).

A very dismal picture of consumption of pulses appears as none of the states achieve the benchmark minimum level of 1.2 kg per capita per month in both the 50th (1993-94) and 61st (2004-05) Rounds. In 1993-94 only the upper 30 percentile class of Madhya Pradesh, Maharashtra and Uttar Pradesh manage a higher consumption than 1.2

kg per capita per month. In 2004-05 none achieve it (Appendix Table 3.1).

In 1993-94, six states, Uttar Pradesh, Madhya Pradesh, Maharashtra, Punjab, Gujarat and Karnataka, show more than all-India average consumption. Kerala, Orissa and West Bengal showed less than 60 percent of all-India average consumption during that period. Inequality in consumption can be seen from the fact that the consumption of bottom 30 percentile group was only around 50 percent of the upper 30 percentile group in most states except Kerala(24.56%), Orissa(37.04%), Tamil Nadu(38.24%), West Bengal(41.94%) and Andhra Pradesh(43.14%) where it was even lower (Appendix Table 3.2).

In 2004-05, apart from the six states mentioned above, Andhra Pradesh and Tamil Nadu achieved higher than all-India average consumption. As a percent of upper 30 percentile class, the consumption of bottom 30 percentile has increased on an average to around 57 percent but remains quite low in Kerala (30.34%) and Orissa (36.53%) [Appendix Table 3.3].

If we see the change in consumption over the two periods, the situation appears grim. As a rule there has been a fall in consumption for all people and almost everywhere in India. Only Kerala and Orissa have seen a rise in consumption over the period not only on an average but also in all the three percentile groups. Assam (except bottom 30 percentile) and Tamil Nadu (except Upper 30 percentile) have also seen an increase. The fall in the bottom 30 percentile group is sharp in states like Madhya Pradesh (-20.71%), Punjab (-19.25%), Haryana (-18.92%) and Bihar (-15.37%) [Appendix Table 3.4].

Although the fall in consumption of upper 30 percentile and middle 40 percentile group (to some extent) can be explained as the process of diversification to other dietary proteins like milk products, fish, eggs etc., the same reason appears weak for the bottom 30 percentile. Not only are prices of such commodities out of reach of the poor but the increase in prices of pulses itself may be crowding out the poor from the market resulting in the present scenario.

note: i) -
24 P11M & 11M -
in - rise ?

3.6.2: Urban Consumption of Pulses and Pulse Products.

The average all-India consumption of pulses in urban India was higher than the all-India rural average both in 1993-94 and 2004-05. This is true also for bottom 30, middle 40 and upper 30 percentile groups (Appendix Table 3.5).

In 1993-94, the all-India average consumption was 0.86 kg. It was 0.59 kg, 0.85 kg and 1.13 kg for bottom 30, middle 40 and upper 30 percentiles respectively. In 2004-05, the average consumption fell to 0.783 kg. For the bottom 30, middle 40 and upper 30 percentile groups it fell to 0.581 kg, 0.778 kg and 0.993 kg respectively (Appendix Table 3.5).

Comparing with the benchmark minimum level of 1.2 kg per capita per month, we find a similar dismal situation as in case of rural sector. Only upper 30 percentile of 5 states, Madhya Pradesh, Tamil Nadu, Uttar Pradesh, Andhra Pradesh and Gujarat manage that level in the 50th Round(1993-94). None manage it in 61st Round (2004-05) [Appendix Table 6.5]. This shows the abysmally lower than required level of pulses consumption even in urban areas.

In 1993-94, six states, Madhya Pradesh, Gujarat, Uttar Pradesh, Maharashtra, Punjab and Karnataka had more than all-India average consumption. Inequality in consumption, similar to rural areas, was also seen in the urban areas. Consumption levels of bottom 30 percentile, in most states, were about half of the upper 30 percentile group. Again, situation in Kerala (29.73%) and Orissa (33.91%) was worse (Appendix Table 3.6).

In 2004-05, apart from the six states mentioned in the above paragraph, Andhra Pradesh and Tamil Nadu had higher than all-India average consumption. On an average, the consumption levels of bottom 30 percentile was around 58 percent of the upper 30 percentile. Kerala (29.67%) and Orissa (41.52%) showed lower values (Appendix Table 3.7).

Analyzing the change in consumption over the two periods we find a similar situation as in rural areas except for the bottom 30 percentile whose consumption has improved in more than half the states. In Assam and Kerala there has been an increase throughout. Nevertheless, there has been a sharp fall in the bottom 30 percentile consumption in Rajasthan (-17.87%), Haryana (-17.08%), Madhya Pradesh (-12%) and Punjab (-10.45%) [Appendix Table 3.8].

Thus, though the situation in urban areas seems better than rural areas (as far as the consumption of bottom 30 percentile expenditure group is concerned), more or less the same pattern and trends are seen. Consumption remains lower than the physiologically required levels and is falling over time.

3.7 : Consumption of Arhar

Arhar is one of the prominent pulses consumed in India. Its consumption is around 30 percent of the total consumption of pulses in rural areas and around 38 percent in urban areas.

3.7.1 : Rural Consumption of Arhar

Consumption of arhar is high in the states of Uttar Pradesh, Maharashtra, Madhya Pradesh, Andhra Pradesh, Gujarat, Karnataka, Tamil Nadu. Its consumption is very low in states like West Bengal, Punjab, Haryana, Rajasthan and Assam (Appendix Table 3.25)

In 1993-94, the all-India average consumption was 0.230 kg. It was 0.17 kg, 0.23 kg and 0.32 kg for the bottom 30, middle 40 and upper 30 percentiles respectively. In 2004-05, the all-India average consumption fell to 0.209 kg. It also fell for the bottom 30, middle 40 and upper 30 percentiles to 0.155 kg, 0.208 kg and 0.263 kg respectively (Appendix Table 3.25).

Consumption of the bottom 30 percentile as a percent of the upper 30 percentile was around 53 percent in 1993-94 and increased to around 59 percent in 2004-05 (Appendix Table 3.26).

Over the two rounds, consumption has fallen in most of the states with the all-India changes in red for all MPCE classes and also for the other three percentile groups. However, it has increased in the case of Andhra Pradesh and Orissa. Also except for the upper 30 percentile group, it has increased in the states of Karnataka, Maharashtra, Rajasthan and Tamil Nadu (Appendix Table 3.28).

3.7.2 : Urban Consumption of Arhar

Urban consumption figures also follow the observed pattern of being higher than the rural counterparts.

The same states, as mentioned in the previous section on rural consumption show high and low values of arhar consumption.

The all-India average consumption was 0.33 kg in 1993-94 which fell to 0.295 kg in 2004-05. In 1993-94 the all-India figures for bottom 30, middle 40 and upper 30 percentiles were 0.23 kg, 0.33 kg and 0.41 kg respectively which fell marginally to 0.22 kg, 0.3 kg and 0.364 kg in 2004-05(Appendix Table 3.29).

Bottom 30 percentile consumption as a percent of upper 30 percentile consumption was more equal than in rural areas and has increased from around 56 percent in 1993-94 to around 60 percent in 2004-05 (Appendix Table 3.30,3.31).

Over the two periods, consumption has fallen in most states except Orissa and Kerala. The fall has been sharper for the upper 30 and middle 40 percentiles as compared to the fall in consumption of bottom 30 percentile class (Appendix Table 3.32).

3.8 : Consumption of Gram (split)

Consumption levels of gram is high though the figures here doesn't reveal so as consumption is spread under various data heads like gram (split), gram, pulse products etc.

3.8.1 : Rural Consumption of Gram (split)

In 1993-94, the all-India average consumption was 0.06 kg. It was 0.03 kg, 0.05 kg and 0.1 kg for the bottom 30, middle 40 and upper 30 percentiles. In 2004-05, the average consumption fell marginally to 0.058 kg. While there was a marginal increase in the consumption of bottom 30 percentile (0.033 kg) and middle 40 percentile (0.055 kg), there was a fall for the upper 30 percentile (0.088 kg) [Appendix Table 3.9].

The consumption of gram (split) is high in states like Punjab, Haryana, Rajasthan and Maharashtra (Appendix Table 3.10) and low in states like Assam, Kerala, Orissa and West Bengal (Appendix Table 3.11).

Inequality in consumption is also high as all-India average consumption of bottom 30 percentile as a percentage of upper 30 percentile was 30 percent in 1993-94 and 37.5 percent in 2004-05 (Appendix Table 3.10, 3.11).

Most of the states have registered a fall in the consumption of gram (split) over the two rounds. For the bottom 30 percentile, the fall is noticeable in the case of Rajasthan (-52%), Orissa (-30%), Uttar Pradesh (-30%) and Haryana (-21%). However Bihar, Maharashtra and Tamil Nadu have seen an increase in consumption. The increase is as much as 190% in the case of bottom 30 percentile population in Bihar (Appendix 3.12).

3.8.2 : Urban Consumption of Gram (split)

Consumption of split gram was comparatively more in urban areas than in rural areas in both rounds and for all the three percentile groups. In 1993-94, the all-India average consumption was 0.08 kg. It

was 0.04 kg, 0.07 kg and 0.11kg for bottom 30, middle 40 and upper 30 percentiles respectively. In 2004-05, the all-India average consumption fell to 0.073 kg. As in the rural case, it has increased for the bottom 30 (0.052 kg) and middle 40 (0.073 kg) percentiles but fell for the upper 30 percentile (0.096 kg). Increasing incomes of the lower classes and dietary diversity of upper classes in urban areas may be a reason for such a trend (Appendix Table 3.13).

Again, as in the rural case, Punjab, Haryana, Rajasthan and Maharashtra show high consumption in both rounds. In addition in 2004-05, Bihar and Uttar Pradesh show high consumption. Inequality in consumption has decreased over the two rounds as in 1993-94 the average consumption of bottom 30 percentile as a percentage of upper 30 percentile was around 36 percent which increased to around 54 percent in 2004-05. Kerala, Orissa and West Bengal showed a lower level of consumption in both rounds (Appendix Table 3.14, 3.15).

Consumption has fallen for most states over the two rounds. For the bottom 30 percentile population, the fall is sharp in the case of Assam (-65%), Madhya Pradesh (-32%) and Andhra Pradesh (-22.5%). However the states of Bihar, Uttar Pradesh and Maharashtra have recorded an increase in consumption with the increase in the bottom 30 percentile expenditure group in the first two states being 210 percent and 180 percent respectively (Appendix Table 3.16).

3.9: Consumption of Gram

NSSO provides data for gram as distinct from gram (split). The former includes gram products like 'sattu' obtained by frying and powdering of gram.

3.9.1: Rural Consumption of Gram

In the 50th Round the all-India average consumption was 0.04 kg and it fell to 0.031 kg in the 61st Round. In the same period the consumption of bottom 30 percentile increased marginally while that of middle 40 and upper 30 percentile fell sharply (Appendix Table 3.17).

In both rounds, states with high consumption were Punjab, Haryana, Bihar, Karnataka, Kerala and Uttar Pradesh. On the other hand Andhra Pradesh, Orissa and West Bengal showed a very low level of gram consumption. Consumption in 50th Round was highly skewed with the bottom 30 percentile just accounting for around 14 percent of the consumption of the upper 30 percentile. This situation has improved marginally in the 61st Round with the figure at around 36 percent (Appendix Table 3.18, 3.19).

Consumption has fallen drastically in most of the states except Punjab, Karnataka and Kerala. Bottom 30 percentile expenditure group of these states, together with Bihar and Tamil Nadu, have shown a very high increase in consumption. This increase has offset the fall of other states to raise the all-India average consumption of bottom 30 percentile by as much as 70 percent (Appendix Table 3.20).

consumption
of gram (1) >
to rural & rural 2

3.9.2: Urban Consumption of Gram

Urban consumption was higher than rural in both the rounds for all-India average of all MPCE classes as well as for the three percentile groups.

In 1993-94, the all-India average consumption was 0.05 kg. It was 0.02 kg, 0.05 kg and 0.09 kg for the bottom 30, middle 40 and upper 30 percentiles respectively. In 2004-05, while there was a marginal increase in consumption for the bottom 30 percentile while the consumption of middle 40 and upper 30 percentiles fell sharply (Appendix Table 3.21).

Consumption was high, in both rounds, in Bihar, Punjab, Haryana and Kerala while it was low in Andhra Pradesh, Orissa, Rajasthan and West Bengal. Consumption was highly concentrated in the upper 30 percentile group, with the bottom 30 percentile having just 22.22 percent (in 1993-94) and 33.33 percent (in 2004-05) of the upper 30 percentile consumption (Appendix Table 3.22, 3.23).

Consumption has fallen in most of the states over the two rounds except in Karnataka, Kerala and Tamil Nadu. The fall in consumption is very high in states like Haryana, Rajasthan, Uttar Pradesh, West Bengal, Assam and Bihar. While bottom 30 percentile expenditure group of most states show an increase in consumption, the average is marginally on the right side of zero because of the huge fall in other states (Appendix Table 3.24).

3.10 : Consumption of Moong

Consumption of moong is around 13 percent of the total consumption of pulses in rural areas. In urban areas, it is a couple of points higher.

3.10.1 : Rural Consumption of Moong

Consumption of moong is high in the western part of the country especially in the states of Gujarat, Rajasthan, Haryana, Punjab and Maharashtra. It is also high in the eastern states of Andhra Pradesh and Orissa (Appendix Table 3.33).

The all-India average consumption of moong was 0.1 kg for all MPCE classes in 1993-94. It fell to 0.092 kg in 2004-05. For the bottom 30 percentile group the consumption was the same in both rounds, at 0.06 kg. For the other two percentile groups it however fell, with the fall higher in the case of the upper 30 percentile (Appendix Table 3.33).

The average consumption of the bottom 30 percentile group as a percentage of the upper 30 percentile group seems to have improved over the period with it being around 37 percent in 1993-94 and 46 percent in 2004-05 (Appendix 3.34, 3.35). However, as noted above, overall consumption for this group has not changed.

The fall in consumption was visible in most states over the two rounds. It was particularly steep in Andhra Pradesh, Gujarat and Madhya Pradesh. However Assam, Kerala and Tamil Nadu witnessed a significant rise in consumption especially for the bottom 30 percentile group. Also noteworthy is the 183 percent rise in consumption of this group in Rajasthan (Appendix 3.36).

3.10.2: Urban Consumption of Moong

In 1993-94 the all-India average consumption of moong in urban areas was 0.140 kg. For the bottom 30, middle 40 and upper 30 percentile groups it was 0.09 kg, 0.13 kg and 0.18 kg respectively. The corresponding figures in 2004-05 were 0.114 kg, 0.078 kg, 0.115 kg and 0.149 kg (Appendix Table 3.37). Urban consumption figures were higher than their rural counterparts in both rounds.

As in the rural areas, the same group of states shows higher consumption in urban areas as well. To this group should be added Assam whose consumption has improved for the bottom 30 percentile populations.

The consumption of the bottom 30 percentile groups is around half the upper 30 percentile consumption in both rounds. Inequality in consumption is quite low in the case of Gujarat, Orissa, Punjab and Rajasthan. Over the period situation has also improved in the case of Assam (Appendix Table 3.37, 3.39).

There is a sharp fall in the consumption of moong in urban areas over the two rounds with most states registering a double digit fall. However the bottom 30 percentile populations of the states of Assam, Bihar and Tamil Nadu witnessed a significant increase in their consumption (Appendix Table 3.40).

3.11: Consumption of Masur

Masur consumption is on an average about 16 percent of rural pulse consumption and 12 percent in urban areas. Eastern states are the most important consumers of this pulse crop. Consumption is especially high in states like Assam, Bihar and West Bengal.

3.11.1: Rural Consumption of Masur

In 1993-94, the all-India average consumption was 0.13 kg which fell to 0.105 kg in 2004-05. For the bottom 30, middle 40 and upper 30 percentiles it was 0.1 kg, 0.14 kg and 0.14 kg respectively in 1993-94 which also registered a decline in 2004-05 to 0.089 kg, 0.111 kg and 0.113 kg (Appendix Table 3.41).

Inequality in the consumption of masur in rural areas is much less as compared to other pulse crops. In 1993-94, the average consumption of bottom 30 percentile group as a percentage of the upper 30 percentile group was around 70 percent which improved to about 78 percent in 2004-05 (Appendix Table 3.42, 3.43). This shows the 'inferior goods' nature of masur.

Over the two rounds, there has been a massive fall in consumption of masur in almost all the states including two high consuming states of West Bengal and Bihar. The fall has been more in the case of the upper 30 and the middle 40 percentiles (Appendix Table 3.44).

3.11.2: Urban Consumption of Masur

Unlike the trend seen in the consumption of most pulse crops, the consumption of masur is relatively higher in rural than in urban areas.

The all-India average consumption in 1993-94 was 0.110 kg. For the three percentile groups it was 0.1 kg, 0.1 kg and 0.12 kg respectively. In 2004-05, the average consumption fell to 0.092 kg due to a fall for the all three percentile groups (Appendix Table 3.45).

Masur consumption is prevalent especially among the poorer classes. In higher income groups its consumption is small as compared to their consumption of other pulses. This is also brought out by the high degree of equality in the consumption of the bottom 30 percentile group and the upper 30 percentile group. In 2004-05, their average consumption was almost equal (Appendix Table 3.46, 3.47).

Over the two rounds, like in rural areas, there has been a fall in the consumption of masur in all most all states and in all consumer expenditure groups. Only Assam has registered a rise in consumption on this period. For most states the fall has been steep particularly for the upper 30 percentile group (Appendix Table 3.48).

3.12 : Consumption of Urad

Urad consumption forms about 12 percent of the consumption of pulses in both rural and urban areas.

3.12.1 : Rural Consumption of Urad

The consumption of Urad is high in rural areas of states like Uttar Pradesh, Tamil Nadu, Madhya Pradesh, Punjab, Kerala and Andhra Pradesh.

In 1993-94, the all-India average consumption of urad was 0.1 kg which fell to 0.08 kg in 2004-05. For the bottom 30 percentile the fall

was from 0.07 kg to 0.048 kg during the same period. The middle 40 and the upper 30 percentiles also witnessed a fall (Appendix Table 3.49).

Inequality in its consumption is high and has increased over the period under study. The consumption of bottom 30 percentile group which was around 50 percent of the upper 30 percentile group in 1993-94 fell to about 39 percent in 2004-05. Consumption has been especially skewed in the case of Andhra Pradesh, Kerala and Tamil Nadu (Appendix Table 3.50, 3.51).

Over the two rounds most states witnessed a fall in urad consumption with the average all-India figures in double digit. For the bottom 30 percentile the fall was by about 31 percent. However, states like Andhra Pradesh, Kerala, Karnataka, Orissa and Tamil Nadu registered a rise in consumption during this period. Also the upper 30 percentile group of most states had a positive increase in consumption over the two rounds (Appendix Table 3.52).

3.12.2 : Urban Consumption of Urad

On an average the consumption of urad is higher in urban than rural areas.

In 1993-94, the all-India average consumption was 0.11 kg and it fell to 0.09 kg in 2004-05. For the bottom 30, middle 40 and upper 30 percentiles the consumption figures were 0.07 kg, 0.1 kg and 0.15 kg respectively in 1993-94. In 2004-05 they fell to 0.057 kg, 0.087 kg and 0.128 kg respectively (Appendix Table 3.53).

Consumption of urad was high in the urban areas of Tamil Nadu, Andhra Pradesh, Uttar Pradesh, Punjab, Kerala and Karnataka. The

consumption of bottom 30 percentile expenditure group was less than 50 percent of the upper 30 percentile consumption in both rounds. It was more skewed in the states of Andhra Pradesh, Karnataka and Kerala. Also, in the 61st Round Assam showed a highly unequal consumption pattern (Appendix 3.54, 3.55).

Like in rural areas, most states showed a fall in consumption over the two rounds with the fall being steep (-18.57%) in the case of the bottom 30 percentile group. Kerala, Orissa and Andhra Pradesh however witnessed an increase in consumption (Appendix Table 3.56).

3.13: Consumption of Khesari

Khesari is consumed mainly by the very low income group households. Its consumption decreases as we move up the consumer expenditure classes. Thus like masur it also has an 'inferior good' status.

3.13.1: Rural Consumption of Khesari

Rural consumption of khesari was on an average just 2 percent of the total consumption of pulses. Bihar, Madhya Pradesh, Maharashtra and West Bengal accounted for the bulk of its consumption (Appendix Table 3.57).

Since it is consumed mainly by the lower income groups, the consumption of the bottom 30 percentile group was on average more than 250 percent that of the upper 30 percentile group (Appendix Table 3.58, 3.59).

Over the period of study, its consumption has fallen in most states where it is consumed (Appendix Table 3.60). This may be because of its 'inferior good' nature.

3.13.2: Urban Consumption of Khesari

Urban consumption of khesari is insignificant. There is a small consumption by the states mentioned in the section above which also has fallen over the two rounds (Appendix Table 3.61, 3.62, 3.63, 3.64).

3.14: Consumption of Peas

Consumption of peas is also insignificant compared to other pulses. It barely constitutes on an average 2 percent of the total pulse consumption in the country.

3.14.1: Rural Consumption of Peas

Peas consumption was quite low and only in a handful of states as seen from data of the 50th Round. 61st Round data shows that its consumption has picked up (Appendix Table 3.65).

In 1993-94 its consumption was restricted mainly to the states of Uttar Pradesh, Bihar, Maharashtra, Gujarat and Kerala. However, by 2004-05 almost all states show a rise in consumption with the bulk of it being consumed in Uttar Pradesh (Appendix Table 3.66, 3.67).

Unlike most other pulse crops, over the period of our study, its consumption has significantly risen not only for all MPCE classes but also for each of the three percentile groups with the rise being 130 percent for the bottom 30 percentile (Appendix Table 3.68).

3.14.2: Urban Consumption of Peas

Urban consumption of peas has been on an average lower than in rural areas. Uttar Pradesh, Maharashtra, Orissa and West Bengal are the main consumers. Its consumption has picked up in Kerala over the period. Except for the upper 30 percentile group, there has been an increase in its consumption, between the 50th and 61st Rounds, with an average increase of 90 percent for the bottom 30 percentile group (Appendix Tables 3.69, 3.70, 3.71, 3.72).

3.15: Consumption of 'Other Pulses'

NSSO provides data under 'other pulses' which includes the local varieties consumed and also some of the pulse products like 'besan'.

The consumption of 'other pulses' was around 11 percent of the total consumption of pulses in both rural and urban areas in 1993-94. By 2004-05, this has decreased to around 5 percent showing a decrease in its relative importance in the consumption basket.

3.15.1: Rural Consumption of 'other pulses'

Its consumption is significant in the western and north-western part of the country especially in the states of Punjab, Haryana, Rajasthan, Gujarat, Maharashtra and Karnataka (Appendix Table 3.73).

The consumption of the bottom 30 percentile group as a percentage of the upper 30 percentile group has increased over the two rounds from half to two-thirds (Appendix Table 3.74, 3.75).

Between 1993-94 and 2004-05, except the state of Assam, all other states have recorded a fall in consumption with the all-India average being over 50 percent for all MPCE classes and also for the bottom 30, middle 40 and upper 30 percentile groups (Appendix Table 3.76).

3.15.2: Urban Consumption of 'other pulses'

Consumption under this head is relatively more in urban areas than in rural areas except for the bottom 30 percentile group.

Again as mentioned in the previous section consumption is more in the western and north-western parts of the country (Appendix Table 3.77). However, unlike in rural areas, consumption is more skewed and the average consumption of the bottom 30 percentile group is only a third of the upper 30 percentile income group (Appendix Table 3.78, 3.79).

Over the two rounds there has been a steep fall in its consumption in almost all states with all-India average fall being more than 60 percent for all MPCE classes and the three percentile expenditure groups (Appendix Table 3.80).

3.16: Probable reasons for such a consumption pattern

The analysis of the preceding sections shows a very disturbing trend of consumption of pulses. Over the period of study, consumption has declined for almost all pulse crops (except peas). The fall is conspicuous in all the three expenditure groups.

The reason put forward by the government for the fall in consumption has been usually the diversity in consumption argument. It is argued that with liberalisation consumption pattern has changed. Firstly, income levels of people have increased which has led them to demand more of hitherto expensive food items like milk, milk products, eggs, meat, fish etc. and thus move away from the traditional staple diet. Secondly, with the liberalisation process starting to influence the life-style of people, there has been an increase in the consumption of 'processed food' and also frequency of eating out has increased especially in urban areas. Since such consumption is not accounted for directly under consumption of pulses, we find a fall in the same.

Although the arguments above may seem convincing, they may not be capturing the whole story. The reason for the fall in consumption of the upper 30 percentile income group may be and in fact should be different from the fall for the bottom 30 percentile income group. Although the diversity argument seems valid for the former it seems weak for the latter. The supply side factors have a role to play in its explanation. The continuously decreasing supply amidst rising population has led to a steep fall in per capita availability. With imports trying to partially make up for the loss, the equilibrium is achieved in the market by a rise in prices. Since pulses are not covered in our public distribution system, this leads to crowding out of the lower income groups from the market and the resultant fall in their consumption.

The analysis of the comparative price changes over the period and the changes in actual physical consumption of other dietary proteins is beyond the scope of this study but would be an interesting question to researchers. However what is important to us is whatever be the

changes in the pattern of consumption the nutrition requirements of the population should be met. This is the subject of study of the next chapter where we analyse the changes in protein consumption of the population over the period of study.

3.17: Important Observations

In this section we list some of the important observation from the analysis in this chapter.

In rural areas, there has been a fall in the consumption of rice over the period of study, for most states, for the middle 40 and upper 30 percentiles. However, for the bottom 30 percentile, there has been an increase which may be attributable to the public distribution system and the fact that the diversification argument may not hold for the bottom 30 percentile expenditure group. In urban areas, however there has been a fall in the consumption of all the percentile groups, although about half the states show an increase in consumption in the bottom 30 percentile expenditure group.

In the case of wheat, though there is a fall in the all-India average consumption between 1993-94 and 2004-05, there has been an increase in the average consumption of wheat for the bottom 30 percentile expenditure group in both rural and urban areas. Like in the case of rice, this may be attributed to the provision of wheat in the public distribution system.

However, when total cereals are considered there has been an across the board fall in both rural and in urban areas. This shows the

changing tastes and preferences and diversification of the consumption basket especially for the higher income groups.

Tastes and preferences strongly shape the consumption of pulses in the different regions of India. Consumption of moong, urad and gram is more prevalent in north-western parts of the country. In the gangetic plains of Uttar Pradesh and Bihar consumption of arhar, gram, gram (split), urad, khesari (in rural areas), and peas is comparatively more. In western parts of the country arhar, gram (split), moong, khesari (rural Maharashtra) and peas show higher consumption. In central India, consumption of arhar, urad and khesari is more common. In southern parts of the country consumption of arhar, gram, urad and peas is prevalent. Consumption of masur is more common in the eastern parts of the country. However, arhar, urad, khesari (rural West Bengal) and peas are also consumed.

Planning Commission has pegged the physiological requirements of pulses at 40 gms per capita per day. This translates into 1.2 kg per capita per month.

Looking at the consumption of pulses with the yardstick of the physiological norm, the situation appears very grim. In the 50th round, only the upper 30 percentile expenditure group of 3 states in rural India and 5 states in urban India had consumption levels equal to or more than the norm. The bottom 30 percentile and the middle 40 percentile of none of the states could make it in both rural and urban areas.

The situation became worse in the 61st Round when not even the upper 30 percentile expenditure group had the required consumption levels. Though one is again tempted to think that this is by choice (if the diversification of consumption basket holds), but it has serious

nutritional consequences as we will see in the next chapter. For the bottom 30 percentile, their consumption levels are nowhere near especially in rural areas.

The all-India average monthly per capita consumption of all MPCE classes for pulses (total) in rural areas was 0.76 kg in 1993-94 and fell to 0.674 kg in 2004-05. This fall was due to a fall in the consumption of pulses of all the three percentile groups.

In urban areas, the all-India average was 0.86 kg in 1993-94 and fell to 0.783 kg in 2004-05. Like in rural areas, this fall was due to a fall in the consumption of all the three percentile groups. Thus the rise in the consumption of bottom 30 percentile expenditure group which was visible in the case of rice (rural) and wheat (both rural and urban) is conspicuously absent in the case of pulses (total). However, in urban areas, over the period of study, most of the states show an increase in consumption of pulses for the bottom 30 percentile expenditure group. Though, the average is on the left side of zero. This has significant contribution in increasing nutritional intake for this section of population as we will see in the next chapter.

There has been a sharp fall in the pulses consumption, over the period of study, for the bottom 30 percentile expenditure group in rural areas of Madhya Pradesh, Punjab, Haryana, Bihar and in urban areas of Rajasthan, Haryana, Madhya Pradesh and Punjab. Rural areas of Kerala and Orissa and urban areas of Kerala and Assam had an increase in the consumption of pulses for all the three percentile expenditure groups in the period of study. Thus we find that consumption levels are falling in states with higher consumption levels and rising in states with lower consumption levels.

222

HP, Bihar
and in the
category

Except peas, all other pulses have shown a fall in consumption (average of all MPCE classes), over the period of study, in both rural and urban areas of the country. The situation is very similar for the consumption pattern of the upper 30 percentile expenditure group just that in this case there was a fall in even peas consumption in urban areas.

In comparison to the above, the pattern of consumption of pulses in the bottom 30 percentile expenditure group is a little better. Gram, gram (split) and peas show a rise in consumption in both rural and urban areas between 1993-94 and 2004-05. However, for all other pulses, there has been a fall in both rural and urban areas.

Thus the analysis in this chapter reveals that the staple 'daal-chawal-roti' of the traditional Indian food basket has witnessed a steep decline in the period of our study. In the next chapter we look at the consequences of such a decline on the nutritional aspect of our populations. Common sense though, already foretells the story ahead loud and clear.

CHAPTER 4

THE PULSES ECONOMY OF INDIA: THE DEMAND-SUPPLY MISMATCH AND ITS NUTRITIONAL CONSEQUENCES (1993-94 to 2004-05)

We have seen in the last two chapters the supply side and the demand side of the pulses economy of India since 1990. Analysis reveals that there has been substantial mismatch between the two. Mismatch here needs to be seen from a normative point of view. This means that the desired demand (based on need) for a society may be more than the actual demand (based on purchasing power). The demand side we saw in Chapter 3 was the actual demand but the normative prescriptions may be more considering the nutritional requirements. The augmentation of the supply side then becomes important else the equilibrium will be achieved by higher prices.

This seems to partially explain what has happened in India. The supply side has not been able to meet the required demand and the prices have played the equilibrating factor crowding out consumption of the poorer classes with adverse consequences for their health. The other part of the story is the diversification of the consumption basket which is true especially for the upper income groups. The readjustment of the different sources of nutrition in this changing consumption

basket needs to be analysed as to whether the minimum required of each nutrient and the balance between the nutrients is being met by the change. If not then the change is not healthy and the government would need to bring in the desired change by influencing the consumption pattern.

The objective of this chapter is to highlight the importance of pulses in the protein nutrition of our country, to look at the different sources of proteins and their relative importance, and to analyse the change in protein intake levels in both rural and urban India between 1993-94 and 2004-05.

While looking at the different sources of proteins, this chapter looks at averages for different states and not for the different percentile expenditure groups within the states. However, while looking at the protein intake levels, detailed analysis of different percentile expenditure groups is done for all the states, for both rural and urban areas.

This chapter tries to reason the change in protein intake based on the analysis of Chapter 3 where actual physical consumption of pulses and cereals were analysed. Analysis of changes in actual physical consumption of other dietary sources of protein has not been done and is a matter of further research.

This chapter has four sections. Section 4.1 highlights the importance of proteins for a healthy and disease-free body. It explains why the vegetarian population should be more careful about its food intake for balanced protein nutrition and also tells about the physiological requirements of protein consumption based on sex, age etc.

Section 4.2 looks at the qualitative aspect of animal and non-animal sources of proteins. Among the non-animal sources it highlights the importance of pulses as a good source of protein and also many other micro-nutrients compared to cereals and oilseeds.

Section 4.3 looks at the changes in the intake of proteins between the period 1993-94 and 2004-05 using NSSO data for the 50th and 61st Rounds respectively. This section is divided in two parts. In Section 4.3.1, a look at the different sources of proteins, their relative importance and changes in their relative shares has been looked into over the period of study. This analysis is done for all the major states (as in Chapter 3) and for both rural (Section 4.3.1.1) and urban (Section 4.3.1.2) India.

Section 4.3.2 is the essence of this chapter. The importance of this section lies in the fact that it tries to draw a full circle to the analysis of Chapter 3 and 4. It analyses the changes in protein consumption state-wise and correlates it with the analysis of Chapter 3 to find the reason for such a change. This is done for both rural (Section 4.3.2.1) and urban (Section 4.3.2.2) India.

Section 4.4 concludes with some observations from the analysis of this chapter.

4.1: Importance of Proteins

Proteins are one of the most essential nutrients required for a healthy body, others being carbohydrates, fats, minerals and vitamins. Here we are concerned about proteins because the study concerns pulses which are a rich source of proteins as we will see in the next section. Thus the falling intake of pulses, as we observed in the previous chapter, should decrease protein intake also unless made up by other sources.

Proteins are required for building of new tissues and in the repair and maintenance of existing ones. Thus they are rightly called body-building nutrients.

Proteins are made up of amino acids. There are roughly about 20 types of amino acids. Just like 26 letters of the alphabet make so many different words, these 20 amino acids make a far greater number of proteins. Out of these 20 amino acids about 12 can be manufactured by the body itself. The rest needs to be supplemented from food intake. These are known as 'essential' amino acids.

According to the Expert Group Report of ICMR (2009), a gram of protein is required per kg body weight. Requirement of males is generally higher than females but pregnant and lactating mothers need a higher protein intake. Also though the bodyweight of children is much lower compared to adults, their requirement of proteins is similar since they are at a growing stage and their body requires a lot of body-building proteins.

It is difficult to arrive at one single figure as the minimum requirement of protein for a country as a whole since there is wide

variation in the number of men, women, and children and also since protein requirements vary with age. Normally most experts put a rough estimate to be around 50 to 60 gms per capita per day. We will keep this in mind while analyzing the actual per capita intake levels in subsequent sections.

Inadequate intake of proteins can cause diseases like kwashiorkor. When it gets combined with deficiency in the intake of carbohydrates also it causes marasmus. Thus adequate levels of intake of protein are very important for a healthy and disease-free body.

4.2: Pulses as an important source of protein

Proteins can be had from both animal and non-animal sources. Milk, eggs, meat, fish etc. are the main sources of animal proteins while cereals, legumes and vegetables are important non-animal sources.

All sources of proteins are not similar in quality. Animal proteins contain all the 'essential' amino acids while the non-animal ones generally lack in one or more 'essential' amino acids. This necessitates, for the vegetarian population especially, the proper mix of proteins sources in the diet so that the body gets the required amounts of essential proteins. For e.g. cereals lack the essential amino acid 'lysine' and pulses 'methionine', but when they are consumed together in proper quantity they compensate for each other's deficiencies and make it a good source of protein (though even then its efficiency level remains below animal proteins). Thus, the traditional 'dal-chawal-roti' diet of the largely vegetarian population of India assumes great significance in the back drop of the above observation.

Among the non-animal sources, pulses are a very important source of proteins. Highest content of protein is found in soyabean. It is about 43.2 gms per 100 gms of the pulse. Lentils have 25.1 gms, black gram has 24 gms, cowpea 24.1 gms, field bean 24.9 gms and green gram 24 gms. Most other pulses on an average have 20 to 22 gms of it (all in 100 gms of the edible portion). When we compare this with cereals we find the difference. Pulses have two to three times the protein content of cereals. Per 100 gms, protein content in rice is 8.5 gms and in wheat 11.8 gms. Even the coarse grains are nowhere near. Jowar has 10.4 gms, bajra 11.5 gms and ragi 7.3 gms per 100 gms. Though oilseeds have comparable levels of protein but they cannot be consumed in large quantities because of their high fat content which is not good for the human heart (Appendix Table 4.1).

Pulses also have comparable levels of calories to cereals. Per 100 gms, energy obtained from rice is 349 kcal. From wheat it is 346 kcal. Again among pulses, soyabean has the highest energy content of 432 kcal which is far greater than rice and wheat. Calories obtained from bengal gram, black gram and lentil is 360 kcal, 347 kcal 343 kcal respectively. Other pulses too have similar levels of calories. Though the levels are lower than oilseeds the latter cannot be had in greater quantities due to reasons stated above (Appendix Table 4.1).

Our body needs many micro-nutrients for proper functioning. Some of them are iron, calcium and phosphorous. Also fibres are needed for proper digestion in the alimentary canal. Pulses have high content of these nutrients and a lot more than cereals (Appendix Table 4.1). Thus pulses are a very important source of proteins and several other micro-nutrients. This assumes great significance especially for the vegetarian population.

4.3: Protein intake (1993-94 to 2004-05)

To analyse the intake of proteins in the liberalization period, we use the NSSO data pertaining to the same quinquennial rounds -- 50th (1993-94) and 61st (2004-05). This will also help us directly draw conclusion from the analysis of the previous chapter where we had seen how the consumption of pulses and cereals has changed in this period.

4.3.1: Percentage of proteins derived from different sources

NSSO data provides information on the different sources of our protein intake. These sources are cereals, pulses, 'egg, fish and meat', 'milk and milk products' and 'other foods'.

4.3.1.1: Percentage of proteins derived from different sources in RURAL areas

In the 50th Round, cereals were the major source of proteins. On an average, they accounted for about 70 percent of the total intake. Orissa (76.6%), Bihar (74.78%), Madhya Pradesh (74.22%), West Bengal (71.49%), Rajasthan (71.1%) and Uttar Pradesh (70.2%) had more than 70 percent of their total protein intake from cereals. On the other hand, Kerala (51.81%) and Punjab (56.48%) had a much lower intake of proteins from cereals (Appendix Table 4.2). Thus, states with low per capita income levels and higher poverty show higher intake from cereals and vice versa.

In the 61st Round, the share of cereals fell to about 66 percent. Orissa (73.89%), Madhya Pradesh (72.63%) and Bihar (72.06%) had a large part of their intake of proteins from cereals in this round also. Again Kerala (45.19%), Punjab (58.06%) and Haryana (59.73%) had a lower share (Appendix Table 4.3).

Over the two rounds, the share of cereals in the total intake of proteins fell in all the states except Punjab. On an average the fall was of 4.39 percent with states like Kerala (-12.78%), Karnataka (-9.24%) and Andhra Pradesh (-8.51%) registering the steepest fall (Appendix Table 4.4). This should be directly related to the fall in consumption of cereals we observed over the two rounds in Chapter 3.

There is a myth in India that pulses are our major source of proteins. The share of pulses in the total intake of proteins in the 50th Round was just around 10 percent although it was the second largest contributor. Maharashtra (12.9%), Madhya Pradesh (12.04%), Gujarat (11.98%) had a higher contribution while Haryana (6.1%), Rajasthan (6.21%) and West Bengal (6.33%) had much lower contributions from pulses (Appendix Table 4.2). This is because of the differences in the tastes and preferences of the people of different regions. For e.g. in West Bengal the consumption of 'egg, fish and meat' is very high and in Haryana and Rajasthan the consumption of 'milk and milk products' is high. This depresses the share of pulses although in Rajasthan and Haryana the intake of proteins is among the highest in the country.

In the 61st Round, pulses fell to the third spot with the category of 'other foods' taking over. Pulses contributed about 9.5 percent on an average. Tamil Nadu (12.98%), Maharashtra (11.87%) and Karnataka (11.65%) had high shares from pulses. Again the share in Rajasthan

(5.64%), West Bengal (6.49%) and Haryana (6.49%) were quite low (Appendix Table 4.3).

Over the two rounds, there was a fall of about 3 percent in the contribution of pulses in total protein intake although majority of the states witnessed an increase in pulses' contribution (Appendix Table 4.4).

As mentioned before, for a vegetarian population, the balanced intake of cereals and pulses is very important for adequate intake of essential amino acids as they make up for each other's deficiencies. In this context it is important to see what is happening to their total contribution. Between 1993-94 and 2004-05, the share of cereals and pulses total has fallen in all the states except Punjab (Appendix Table 4.4). This has been led more by cereals than pulses though there has been a fall in both. This shows the effect of the changing consumption basket but whether the change has ultimately led to more protein consumption or not is a question we will address shortly.

The share of milk and milk products in the total intake of proteins was around 9 percent in the 50th Round. Punjab (25.59%), Haryana (23.53%) and Rajasthan (17.49%) had a much larger share while Orissa (2.09%), Assam (3.58%) and West Bengal (3.93%) had a lower share (Appendix Table 4.2). In the 61st Round, the share of milk and milk products increased in most states except Punjab (-9.53%) and Uttar Pradesh (-5.74). Karnataka, Assam and Tamil Nadu had more than 20 percent increase in the share milk and milk products (Appendix Tables 4.2, 4.3, 4.4).

The share of egg, meat and fish in the total intake of proteins was the least in both rounds. It was less than 4 percent. Kerala, Assam and

West Bengal had a much larger share in both rounds. There has been an increase in its contribution over the two rounds (Appendix Tables 4.2, 4.3, 4.4).

The share of 'other foods' on the total intake of proteins has risen significantly. Average increase between 1993-94 and 2004-05 was about 30 percent (Appendix Tables 4.2, 4.3, 4.4). This is an interesting aspect and needs further research.

The increasing share of milk and milk products, egg, meat and fish, and other foods and falling share of cereals and pulses show that consumption basket is being rearranged even in rural areas.

4.3.1.2: Percentage of proteins derived from different sources in URBAN areas

The situation in the urban areas is very similar to what we have seen for the rural areas in the previous section. What is different is the magnitude of the share else the trend is almost the same.

The contribution of cereals in the total intake of proteins was much lower than in rural areas, about 59 percent in 1993-94. It fell further to about 56 percent in 2004-05. The share of pulses also witnessed a fall from 11.54 percent to 11 percent between the two rounds. The combined contribution of cereals and pulses fell for almost all the states. On the other hand, the shares of milk and milk products, egg, meat and fish and other foods were higher than in rural areas and saw an increase over the two rounds. The highest increase, as in rural areas, was in the case of 'other foods' category (Appendix Tables 4.5, 4.6, 4.7).

4.3.2: Per capita per day intake of Proteins

The above analysis shows that cereals and pulses are the most important source of proteins in both rural and urban areas. This means that the per capita intake of proteins should vary largely with the changes in the consumption of the two. Also, it remains to be seen how much better has been the diversification of the consumption basket, i.e. whether nutrition has improved as a result of diversification or not. In the back drop of these questions we analyse the changes in the per capita per day intake of proteins under the period of our study. We take up each state and analyse the change in its intake of proteins, over the period of study, and try to correlate with the analysis of Chapter 3 to find a plausible explanation. This is done for rural and urban areas separately.

4.3.2.1: RURAL Per capita per day intake of Proteins

Andhra Pradesh: The average per capita per day (henceforth the average) intake of proteins in rural Andhra Pradesh was 50.8 gms in 1993-94 which fell to 49.8 gms in 2004-05. For the bottom 30 percentile, the intake was just 39.2 gms in 1993-94 and it fell further to 38.3 gms in 2004-05 (Appendix Table 4.8). A similar fall was observed for the middle 40 and upper 30 percentile income groups also. Though there has been a rise in the consumption of pulses of the bottom 30 percentile expenditure group in rural Andhra Pradesh, the fall in the consumption of cereals may have led to an overall fall in protein intake. For the middle 40 and upper 30 percentile expenditure groups, the decline may have been the effect of a fall in the consumption of both pulses and cereals as seen in Chapter 3.

Assam: Rural Assam has witnessed a rise in the average intake of proteins over the period of study for all the three expenditure groups and thus average intake has also risen. Only factor of concern is the low levels of intake of the bottom 30 percentile which is around 40 gms (Appendix Table 4.8). Analysis of Chapter 3 shows, between 1993-94 and 2004-05, pulse consumption has fallen for the bottom 30 percentile expenditure group by about 8 percent but cereal consumption has risen by over 5 percent thus raising the per capita intake of proteins. For the other expenditure groups though the consumption of cereals have fallen the consumption of pulses have risen by over 10 percent. Also there has been a large increase in the intake of proteins from other dietary sources. All these have led to a happy picture as far as rural Assam is concerned.

Bihar: Rural Bihar presents just the opposite trend of Assam. The intake levels have fallen for all the three percentile groups and thus for the average also. The average intake of proteins was 60.2 gms in 1993-94 which fell to 56.3 gms in 2004-05. For the bottom 30 percentile the fall was from 49.5 gms to 47.9 gms (Appendix Table 4.8). These results follow directly from the more than 16 percent fall in the consumption of pulses and over 8 percent fall in the consumption of cereals observed in the case of rural Bihar in Chapter 3.

Gujarat: In 1993-94 the average intake of proteins in rural Gujarat was 55.6 gms and it fell to 53.3 gms in 2004-05. This fall was due to over 8 percent fall in the intake of the upper 30 percentile group as the intake of the bottom 30 percentile and middle 40 percentile has risen albeit by a small percentage (Appendix Tables 4.8, 4.11). While there has been a fall in the consumption of pulses in all the three percentile groups and thus also in their average over the period,

changes in the consumption of cereals have been different. There has been a rise in the consumption of cereals of the bottom 30 and middle 40 percentile which seems to have offset the fall in the pulses consumption to increase the intake of proteins in rural Gujarat.

Haryana: Protein intake levels of rural Haryana are among the highest in the country. In 1993-94, the average intake of proteins was 78.4 gms. For the bottom 30 percentile it was 49.3 gms. In 2004-05 there has been a fall in the intake of proteins in all the three percentile groups with the fall being highest (-16.45%) for the upper 30 percentile and lowest (-7.91%) for the bottom 30 percentile (Appendix 4.8, 4.11). This again follows from the analysis of Chapter 3 where we had seen that for all the three percentile groups in Haryana there has been a huge fall in the consumption of both pulses and cereals over the two periods.

Karnataka: In rural Karnataka also there has been a fall in protein intake for all the three percentile groups over the period 1993-94 and 2004-05. Of particular concern is the fall in the intake of bottom 30 percentile group from 43 gms to 40.6 gms (Appendix Table 4.8). Reason again is the same as in the case of Haryana.

Kerala: Rural Kerala presents a different picture when compared to the last couple of states. The protein intake of bottom 30, middle 40 and upper 30 percentile groups has risen over the period of study. Though this seems encouraging, the situation is not so rosy especially for the bottom 30 percentile expenditure group of the state. They have the lowest intake (less than 30 gms) of protein in the country. In rural Kerala, cereals and pulses just account for about 50 percent of the total intake of proteins which is quite low compared to other states. There

has been a fall in the consumption of cereals and a rise in the consumption of pulses for all the three percentile groups. The share of pulses has gone up by about 23 percent over the period. Also the increase in protein intake has to be attributed to other dietary proteins like 'egg, meat and fish' category which contributes more than 20 percent of its protein intake.

Madhya Pradesh: Rural Madhya Pradesh has adequate levels of protein intake. However, the average intake of protein which was 63 gms in 1993-94 fell to 55.6 gms in 2004-05. All the three percentile classes, the bottom 30, middle 40 and upper 30 witnessed a fall in protein intake during this period (Appendix Tables 4.8, 4.11). This is a direct consequence of the fall in consumption of pulses (-23.81% average) and cereals (-14.35% average) in rural Madhya Pradesh as seen in the Chapter 3.

Maharashtra: Between 1993-94 and 2004-05, the average intake of protein has risen in rural Maharashtra from 54.8 gms to 55.7 gms mainly due to the rise in intake of the middle 40 percentile group. However the bottom 30 and upper 30 percentile groups witnessed a decline in protein intake (Appendix Tables 4.8, 4.11). We observed in the last chapter a fall in the consumption of both pulses and cereals in all the three percentile groups. The modest increase in protein intake could be attributed to the increase in consumption under 'other foods' category which witnesses a rise of above 60 percent in its share as a source of protein in rural Maharashtra (Appendix Table 4.4).

Orissa: Rural Orissa witnessed a fall in protein intake in all the three percentile groups between 1993-94 and 2004-05. Of particular concern are the intake levels of the bottom 30 percentile group in the

state which saw a decline of about 6.5 percent from 43.5 gms to 40.7 gms (Appendix Tables 4.8, 4.11). This is despite the fact that the consumption of pulses has increased by an average of over 8 percent over this period (which has also led to an increase in its share as source of protein by about 18 percent). But for a state which derives more than 70 percent of its protein intake from cereals the increase in pulses consumptions is eclipsed by a fall of about 12 percent in cereals consumption.

Punjab: Rural Punjab like Haryana has one of the highest levels of protein intake in the country. Unfortunately, like Haryana, its protein levels have also declined heavily under the period of study (Appendix Tables 4.8, 4.11). Falling consumption of pulses and cereals, as seen in the previous chapter, is partly to be blamed for it.

Rajasthan: Rural Rajasthan had the highest levels of per capita per day intake of proteins in the country in both rounds -- 50th (79.4 gms) and 61st (69.6 gms). The protein level of the bottom 30 percentile consumer expenditure group in the state was also the highest in the country (Appendix Tables 4.8, 4.11). However rural Rajasthan has experienced a decline in protein intake of over 12 percent in this period partly due to 22.66 percent decline in the consumption of pulses and about 14.58 percent decline in the consumption of cereals as seen in the last chapter.

Tamil Nadu: At 46.8 gms in 1993-94 and 44.9 gms in 2004-05, rural Tamil Nadu has the lowest average intake of proteins among the states. The protein level of its bottom 30 percentile group is around 33 gms in both the rounds which is very low. The state has, like most other states, witnessed a fall in the protein levels over this period for all three

percentile groups. In the last chapter we saw that the consumption of pulses has increased for Tamil Nadu especially for the bottom 30 percentile group (25.64%). This has been offset by about 7 percent fall in the consumption of cereals during this period. Perhaps it is to the credit of increased pulses consumption that the fall in protein intake for the bottom 30 percentile group has been only -0.89% (Appendix Tables 4.8, 4.11).

Uttar Pradesh: Rural Uttar Pradesh has sufficiently high levels of protein intake, but as has been the rule, its protein levels have also declined over this period for all the three percentile groups (Appendix Tables 4.8, 4.11) primarily due to over 7 percent fall in the consumption of cereals and over 15 percent fall in the consumption of pulses.

West Bengal: Rural West Bengal has modest levels of protein intake and it has fell over the period of study. The intake was just about 40 gms for the bottom 30 percentile group (Appendix Tables 4.8, 4.11). Fall in pulses (-4.52%) and cereals (-11.86%) consumption, as seen in Chapter 3, is majorly to be blamed for this as they are the source of more than 70 percent of the total protein intake.

All-India: The average all-India per capita per day intake of protein has declined from 60.2 gms in 1993-94 to 57 gms in the rural countryside in 2004-05. For the bottom 30 percentile group it came down from 46.8 gms to 45.6 gms in this period. The middle 40 and the upper 30 percentile groups also witnessed a decline (Appendix Tables 4.8, 4.11). Cereals and pulses are a source of over 75 percent of the protein intake at the all-India level. Thus the decline in consumption of pulse by over 11 percent and that of cereals by over 9 percent may be the primary reason for the fall.

Thus we find that the changing consumption pattern observed in the period of study has been detrimental as far as the intake of protein is concerned in the rural areas. Whether the change has been due to diversification of the consumption basket (mostly for the upper and middle income groups) or due to being crowded out because of higher prices (for the lower income groups) the ultimate outcome is a worse off situation with falling levels of proteins for all classes of people. The condition is deplorable particularly for the bottom 30 percentile group which has a very low level of protein intake and would ultimately result in severe malnutrition and protein deficiency diseases if not checked on a war footing. Rural India constitutes about 72 percent of India's population (according to 2001 Census) and thus the falling protein intake raises a serious alarm bell.

4.3.2.2: URBAN Per capita per day intake of Proteins

Urban intake of proteins, as in the rural case, will also be majorly affected by the changes in the consumption of pulses and cereals as they together account for about 70 percent of its total intake (Appendix Table 4.5). We will, like in the previous section, look at the changes in the protein intake state wise in the backdrop of the analysis of Chapter 3.

Andhra Pradesh: Urban Andhra Pradesh has witnessed an increase in protein intake over the period 1993-94 and 2004-05 except for the upper 30 percentile group for which there is a marginal fall. For the bottom 30 percentile group protein intake increased from 38.7 to 40 gms over this period (Appendix Tables 4.12, 4.15). We have seen in

the last chapter that consumption of both pulses and cereals fell for urban Andhra Pradesh. The effect of this is also seen in the fact that the combined share of pulses and cereals fell over 9 percent. So the increased consumption of other dietary proteins should explain this rise. Of particular importance is the category 'other foods' which has seen its share rise over 50 percent in this period (Appendix Table 4.7).

Assam: The intake of protein in urban Assam has increased by an average of 4.5 percent over the two rounds. The intake has increased for all the three percentile groups. For the bottom 30 percentile the intake increased from 41 gms to 43.4 gms over this period (Appendix Tables 4.12, 4.15). Over 4 percent increase in the consumption of pulses together with increase in the bottom 30 percentile and upper 30 percentile consumption of cereals can be partly attributed for this. Increase in consumption of other dietary proteins also plays a role for such a happy state of affairs. Thus, for both rural and urban Assam there has been a rise in protein intake between 1993-94 and 2004-05.

Bihar: Urban Bihar like rural Bihar has an adequate level of protein intake in both rounds but unlike in the latter the protein intake in the former has increased over the two rounds (Appendix Tables 4.12, 4.15). Despite fall in the consumption of cereals, the rise in share of pulses (due to increase in bottom 30 percentile group which had a large population weight), milk and milk products and over 40 percent rise in 'other foods' category explains the increase in protein intake in urban Bihar (Appendix Table 4.7).

Gujarat: The hallmark of protein intake in urban Gujarat has been the over 23 percent increase obtained for the bottom 30 percentile group whose intake increased from 42.1 gms in 1993-94 to

52.1 gms in 2004-05. This along with an increase in middle 40 percentile intake has made the average of urban Gujarat increase by over 4 percent despite a fall in the intake of upper 30 percentile group (Appendix Tables 4.12, 4.15). Again despite a fall in the consumption of cereals, the rise in bottom 30 percentile group consumption of pulses and the increase in 'other foods' (share increased by over 66 percent) category lead the rise in protein intake (Appendix Table 4.7).

Haryana: As in rural Haryana, protein intake is adequately high for urban Haryana also. Unfortunately, like the former the intake of proteins has fallen in the latter case also but by lesser percentages (Appendix Tables 4.12, 4.15). The fall has been due to more than 8 percent fall in pulses and more than 12 percent fall in cereals consumption as observed in the previous chapter. The fall would have been more if the intake from milk and milk products and 'other foods' category had not increased.

Karnataka: Except for the bottom 30 percentile group, protein intake has fallen in urban Karnataka. For this group, intake increased from 41.3 gms to 43.8 gms between 1993-94 and 2004-05 (Appendix Tables 4.12, 4.15). In the last chapter we had seen a rise in the consumption of pulses in urban Karnataka just for the bottom 30 percentile group while for the others it had fallen. Cereal consumption has fallen for all. Thus the increase in consumption of pulses and other dietary proteins may explain the rise in the bottom 30 percentile protein intake.

Kerala: Like rural Kerala, protein intake levels are low in urban areas also. Particularly alarming is the situation for the bottom 30 percentile group. Its consumption is around 35 gms per capita per day.

Between 1993-94 and 2004-05 there has been an increase in the intake of proteins for all the three -- bottom 30, middle 40 and upper 30 percentile groups (Appendix Tables 4.12, 4.15). Although there has been a fall of over 6 percent in the consumption of cereals, the fall has been offset by the rise in the consumption of pulses (over 12 percent increase) and other dietary proteins.

Madhya Pradesh: Urban Madhya Pradesh has sufficiently high levels of protein intake. But like its rural areas, urban areas have also experienced a fall in the intake levels over the period of study (Appendix Tables 4.12, 4.15). As over 75 percent of the source of protein is accounted for by pulses and cereals, the fall in the consumption of pulses by over 16 percent and of cereals by about 6 percent are majorly responsible for the fall.

Maharashtra: Urban Maharashtra also witnessed a fall in its intake of proteins in all the three percentile groups and thus also on an average (Appendix Tables 4.12, 4.15). This again is due to a fall in the consumption of cereals (-10.42% on average) and pulses (4.62% on average). The small fall in the protein intake of the bottom 30 percentile group is due to a rise in its pulses consumption over the period of study.

Orissa: Urban Orissa has experienced a rise in the protein levels for all the three percentile groups though the average intake has been brought down considerably due to 50 percent population weight to the bottom 30 percentile group (Appendix Tables 4.12, 4.15). Increase in the consumption of pulses by the bottom 30 and middle 40 percentile groups and increase in the consumption of cereals by the upper 30

percentile groups are largely responsible for this as cereals and pulses are a source of more than 70 percent of the protein intake.

Punjab: Urban Punjab has one of the highest levels of protein intake in urban India. Between 1993-94 and 2004-05 there has been an increase in protein intake in all the three percentile groups (Appendix Tables 4.12, 4.15). Although there has been a fall in the consumption of pulses, cereal consumption has increased over the period (except for upper 30 percentile). Also, the increase in the consumption of milk and milk products has a great bearing on the increase (with a share of over 20 percent).

Rajasthan: Urban Rajasthan like rural Rajasthan has one of the highest intakes of proteins. Over the period of study, the protein intake fell except for the upper 30 percentile group (Appendix Tables 4.12, 4.15). As seen in the last chapter, the consumption of pulses and cereals have declined over the two period hence the fall in the intake of protein. There has been an increase in the share of milk and milk products and 'other foods' category which should have a direct bearing on the increase in protein intake of the upper 30 percentile group.

Tamil Nadu: Urban Tamil Nadu has low levels of protein intake as compared to other states. Particularly low is its protein levels of the bottom 30 percentile group (less than 40 gms). However there has been an increase in the protein intake of the bottom 30 percentile group over the two rounds. Protein levels for the middle 40 and the upper 30 have fallen (Appendix Tables 4.12, 4.15). As seen in the previous chapter there has been an increase in the consumption of both cereals (6.32%) and pulses (18.82%) for the bottom 30 percentile

group. Consumption had fallen for the middle 40 and upper 30 percentile groups resulting in the fall seen here.

Uttar Pradesh: Urban Uttar Pradesh has, like its rural areas, high levels of proteins consumption. Over the two rounds, there has been an increase in the intake levels except for the upper 30 percentile group. For the bottom 30 percentile the increase has been over 11 percent (Appendix Tables 4.12, 4.15). Both cereals and pulses consumption has fallen over this period so the increase could be only from other dietary proteins especially 'other foods' which has seen its share increase by over 50 percent in the period of study.

West Bengal: Urban West Bengal shows marginally less protein intake than the all-India average (57 gms). Except for the middle 40 percentile group, there has been a fall in the protein intake over the period of study (Appendix Tables 4.12, 4.15). Fall in consumption of both pulses by about 9 percent and cereals by about 11 percent may be seen as partial explanation for this. The fall would have been more if not for the increase in protein intake from 'eggs, fish and meat' and 'other foods' category.

All-India: Between 1993-94 and 2004-05 the all-India average per capita per day intake of proteins remained stagnant at around 57 gms. While the intake levels declined for the middle 40 and the upper 30 percentile groups there was an increase of more than 6.5 percent in the consumption of the bottom 30 percentile. Its consumption increased from 45.6 to 48.6 gms (Appendix Tables 4.12, 4.15). This is a very positive and heartening fact and unlike that seen in the rural areas. Also for the middle 40 percentile group the fall in protein intake has been very close to zero (-0.36%). This is because of the increase in the

protein intake levels of the bottom 30 and middle 40 percentile groups in most of the states. As we have seen in the analysis in this section that the increase in pulses consumption has been instrumental in the increase of protein intake of the bottom 30 percentile group. Also, the role of other dietary proteins is significant but the actual attribution to each of the components is a matter of further research.

Thus we have here drawn a full circle to the analysis we started in Chapter 3. We have analyzed the consumption pattern of pulses (and cereals) and its implications for the nutritional aspect of the country.

We observed in Chapter 3 that in rural areas there has been a steep fall in the consumption of pulses and cereals. We attributed this partly to the diversification of the consumption basket and partly to the rising prices,^{??} especially in the case of pulses. In the urban areas while there was a fall in cereals consumption there was a rise in the consumption of pulses especially for the bottom 30 percentile group over the two rounds. This can be due to the rising income levels for this class which has enabled it to increase at least the consumption of pulses. As we go up the consumer expenditure classes in urban areas, probably pulses are treated like cereals and consumption basket is diversified including hitherto expensive food items like 'milk and milk products', 'eggs, meat and fish' and other dietary proteins. Thus for higher income groups, the consumption of pulses falls. Although these are just plausible explanations and research needs to be done on the different factors underlying such changes.

We have found that this changing consumption basket has led to a decline in protein intake in rural areas but in urban areas the impact

has been much less with the bottom 30 percentile population in fact registering a rise. The role of pulses consumption has been important in explaining this trend. While consumption of pulses declined in most of the states in the rural areas, it experienced an increase in urban areas (more so for the bottom 30 percentile group). Fall in consumption of pulses, together with the fall in consumption of cereals, is a significant reason for the fall in protein consumption in rural areas. Rise in consumption of pulses in urban areas is a major factor in the arrest of the protein intake at 1993-94 levels in urban areas in 2004-05.

4.4: Important observations

In this section we weave together important observations of the analysis in this chapter.

Proteins are body-building nutrients and are required in adequate quantities for healthy growth of the body. They are made up of amino acids not all of which can be made up in our body. Amino acids which need to be supplemented from food are called 'essential' amino acids.

Animal and non-animal sources of proteins differ in quality and the former is superior source of protein as it contains all 'essential' amino acids. Non-animal sources generally lack in one or more of the same and hence various such sources need to be properly balanced in the diet to make up for each other's deficiencies.

Normally a gram of protein is required per kg body weight. However the requirements of children, pregnant and lactating mothers are more. On an average, 50 to 60 gms of proteins are required per capita per day.

Pulses are a very important source of protein especially for the vegetarian population of the country. Its protein content is far more than cereals. Soyabean has the highest protein content among pulses. Apart from being an important source of protein, pulses are also rich in several other micro-nutrients and also have high energy content comparable to cereals.

NSSO provides data for protein intake under broad categories of its sources like 'cereals', 'pulses', 'egg, fish and meat', 'milk and milk products' and 'other foods'.

Cereals are the most important source of protein for both rural (65-70%) and urban India though in urban India its share is comparatively lower (about 55-60%). States with lower per capita income and higher poverty show a higher intake of protein from cereals as the poor are especially dependent on it. Thus Bihar, Orissa, Madhya Pradesh, Uttar Pradesh etc. show very high protein intake from cereals while Punjab, Kerala etc. have a comparatively lower intake from cereals in both rural and urban areas. For most of the states and in both rural and urban areas, the share of cereals as a source of protein has fallen over the two rounds.

Pulses contribute about 10 percent of the total intake of proteins in rural India. In Urban India, it is a couple of points higher. Consumption pattern influences the relative share of pulses in the different regions of India. It is quite high in the western and central part of the country which is largely vegetarian e.g. Madhya Pradesh, Gujarat and to some extent Maharashtra. West Bengal, Kerala and Assam with a large share of 'egg, fish and meat' show a relatively lower share for pulses. Also states like Haryana and Rajasthan, which have a high share

of protein intake from 'milk and milk products' show a lower share from pulses although they have one of the highest intakes of protein.

Over the period of study, the share of pulses has fallen in both rural and urban India. Also if we consider the combined contribution of both cereals and pulses then this has fallen in most states in both rural and urban India. This shows the changing consumption basket as relative shares of 'other foods', 'milk and milk products' and 'egg, fish and meat' is increasing. Also their share is more in urban than in rural areas.

North-western states of Punjab, Haryana and Rajasthan show a high average per capita per day intake of proteins in both rural and urban areas in both rounds. Also Uttar Pradesh and urban Bihar have high levels of protein intake in both periods. On the other hand, Tamil Nadu shows a very low level of protein intake in both rounds and for both rural (45 gms) and urban (49 gms) areas. Rest of the states had moderate levels of protein intake.

Compared to the physiological norms of 50-60 gms per capita per day, the protein intake levels of the bottom 30 percentile population is very low. However bottom 30 percentile expenditure group of Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar show levels close to the norm. Kerala (30-35 gms) and Tamil Nadu (35-37 gms) have very low levels of protein intake. This is the case in both rural and urban areas of the two states. Their protein intake levels are about half the physiological norms. This is an alarming situation and needs to be addressed. This also raises several questions for researchers as these are comparatively much more developed states and this nutritional imbalance seems a paradox.

Except Assam, Kerala and Maharashtra all other states have registered a decline in average per capita protein intake over the period 1993-94 and 2004-05 in the rural areas. In urban India, the situation is more balanced with almost half the states registering a rise although the all-India average is on the left side of zero.

Of particular importance are the protein intake levels of the bottom 30 percentile population. As we have noted previously, that their nutrition levels are much below the physiological norms. As far as the change in protein intake is concerned, the situation in rural and urban India is opposite. In rural areas, most of the states except Assam, Kerala and Gujarat witnessed a fall in protein intake. This a matter of grave concern as more than 70 percent of our population lives in rural areas. In urban areas, only five states, namely Haryana, Madhya Pradesh, Maharashtra, Rajasthan and West Bengal registered a fall. The other ten states registered a rise. The success of urban Gujarat has to be pointed out as protein intake increased by over 23% for the bottom 30 percentile expenditure group over the period. On an average, there was an increase of about 6.5 percent in protein intake of urban India in the period of our study.

For the upper 30 percentile expenditure group, the changing consumption basket doesn't seem to have done well on the nutritional front. In rural areas, only Assam and Kerala witnessed a rise while there was a steep fall in the protein intakes of most other states. In Urban areas, apart from Assam and Kerala, four other states namely Bihar, Orissa, Punjab and Rajasthan saw rise in protein intake. Rest of the states witnessed a fall though the fall was moderate compared to rural areas. Thus the toll has been heavier on rural India.

Kerala and Assam needs special mention as they have registered an increase in protein intake in all the three percentile expenditure groups and in both urban and rural areas between 1993-94 and 2004-05.

Thus, if we compare with the physiological norms, then the protein intake levels of only the upper 30 percentile expenditure group can be considered sufficient in most states. Otherwise the middle 40 is on the boundary and that of the bottom 30 percentile is below the physiological norms.

The changing consumption pattern is influencing this already fragile situation rather negatively though the magnitude of the impact is different in rural and urban areas. Rural protein intake levels have fallen and the condition of the bottom 30 percentile expenditure group is particularly alarming. However, in urban India, the intake levels of proteins have been stagnant on an average but for the bottom 30 percentile expenditure group there has been an increase. Increase in consumption of pulses in urban areas (together with other dietary sources of proteins) has been instrumental in achieving this.

Much more research needs to be done on the very many questions that have arisen out of the analysis in this chapter and affirmative action needs to be taken to address this problem of falling protein intake levels especially in rural areas and particularly for the rural bottom 30 percentile expenditure group.

CHAPTER 5

CONCLUSION

Having looked into the three different but interrelated aspects of the pulses economy of India, it is now time to weave them with a common thread and to understand the issue in its entirety. Often things become clearer when seen in a holistic manner and it is generally true that the whole is greater than sum of the parts.

Keeping this in mind, this chapter first recapitulates the basic objectives and important observations of each chapter and then tries to combine them to see the issues in a larger perspective. Thus, this chapter is divided into three parts. In Section 5.1, we review the objective behind the study. The chapter-wise break-up is also presented. The next three sections, 5.2, 5.3 and 5.4 recapitulates the important observations of chapter 2, 3 and 4. The concluding section, Section 5.5 integrates the lessons from each chapter and attempts some policy suggestions.

5.1: Review of Objective

The objective of the study is to analyse the consumption pattern of pulses in the period 1993-94 and 2004-05 and to find its impact on the protein nutrition.

Three chapters (Chapter 2, 3 and 4) address the different issues relating to the objective. The objective of chapter 2 is to provide the

reader a brief overview of the supply side of the pulses economy in India. This is important for a holistic understanding of the issue. This chapter looks at some of the most crucial macro variables of the supply side for e.g. production, area, yields, area under irrigation, per capita net availability etc. and also compares them with that of wheat and rice.

The objective of chapter 3 is to look at the demand side of the pulses economy in India. This chapter analyses the level and pattern of pulses consumption in India between the periods 1993-94 and 2004-05. For this NSSO data relating to quinquennial rounds 50th (1993-94) and 61st (2004-05) are used. An in-depth analysis is done for most of the states in India and for both rural and urban areas. All the pulses for which NSSO data is available have been taken into consideration. This chapter divides the population into three consumer expenditure groups—the bottom 30 percentile, middle 40 percentile and the upper 30 percentile, and does the above analysis for each of them to find out how the consumption pattern is changing in the different income groups. Level and pattern of consumption of rice, wheat and total cereals are also analysed for the period of study.

Chapter 4 is a continuation of Chapter 3 and the objective of this chapter is to analyse the impact of changing consumption pattern for pulses (and cereals) on the protein nutrition of the population. Here again, NSSO data of the quinquennial rounds 50th (1993-94) and 61st (2004-05) are taken. This chapter highlights the importance of proteins in our body and the importance of pulses as a good source of the same especially for the vegetarian population of the country and more so for the poor who cannot afford expensive animal protein sources like eggs, fish and meat. A state-wise analysis is done and a correlation is sought

to be achieved between the changing levels of protein intake and changing consumption patterns as seen in chapter 3.

5.2: Important Observations of Chapter 2 - THE PULSES ECONOMY OF INDIA - AN OVERVIEW OF THE SUPPLY SIDE

The supply side of the pulses economy presents a picture of stagnation and neglect – both by the farmers and by the government. This section recaps the important observations from the chapter.

- Production of pulses has stagnated for most of the period since independence. As a proportion of foodgrains production, the production of pulses have fallen by more than half, from over 16 percent in 1951 to around 6 percent in 2008-09.
- Acreage under pulses witnessed an increase in the initial years after independence but since the green revolution period of the mid-1960s there has been decline and stagnation.
- As compared to rice and wheat, yield levels have remained abysmally low due to absence of any major technological breakthrough. Also, the productivity levels in other major pulses producing economies have been 2-3 times higher.
- Irrigated area under pulses remained just around 10 percent for almost four decades since independence. It has picked up since 1989-90 and in 2007, 16 percent of the area under pulses was irrigated. However, this is nothing compared to the progress achieved under rice and wheat.
- Some of the important reasons for the stagnation in the pulses economy are low and fluctuating yields due to rainfed cultivation and lack of HYV seeds, shift to other crops giving higher returns

when irrigation becomes available, lack of institutional support from the government and poor impact of government programmes.

- Over the period since independence, the compound growth rate of area under pulses has been negligible and has been very low for yield levels. These two together explain the low growth in production. However, there has been some improvement in the situation in the period from 2000-01 to 2009-10.
- The per capita net availability per day of pulses has halved between 1959 (74.9 gms) and 2009 (37 gms). Thus in recent times this has gone below that required to meet the physiological norms of pulses.

5.3: Important Observations of Chapter 3 - THE PULSES ECONOMY OF INDIA (1993-94 to 2004-05) — A DEMAND SIDE ANALYSIS

This section highlights the important observations from the analysis of levels and patterns of consumption of pulses (and cereals) between 1993-94 and 2004-05 done in Chapter 3.

- In rural areas, there has been a fall in the consumption of rice over the period of study, for most states, for the middle 40 and upper 30 percentiles. However, for the bottom 30 percentile, there has been an increase. In urban areas, however there has been a fall in the consumption of all the percentile groups, though for the bottom 30 percentile expenditure group, there was a rise in almost half the states.
- In the case of wheat, though there is a fall in the all-India average consumption between 1993-94 and 2004-05, there has been an

increase in the average consumption of wheat for the bottom 30 percentile expenditure group in both rural and urban areas.

- In the case of 'total cereals' there has been an across the board fall in both rural and in urban areas, over the period of study.
- Tastes and preferences strongly shape the consumption of pulses in the different regions of India. Consumption of moong, urad and gram is more prevalent in north-western parts of the country. In the gangetic plains of Uttar Pradesh and Bihar consumption of arhar, gram, gram (split), urad, khesari (in rural areas), and peas is comparatively more. In western parts of the country arhar, gram (split), moong, khesari (rural Maharashtra) and peas show higher consumption. In central India, consumption of arhar, urad and khesari is more common. In southern parts of the country consumption of arhar, gram, urad and peas is prevalent. Consumption of masur is more common in the eastern parts of the country. However, arhar, urad, khesari (rural West Bengal) and peas are also consumed.
- Planning Commission has pegged the physiological requirements of pulses at 40 gms per capita per day. This translates into 1.2 kg per capita per month. Looking at the consumption of pulses with the yardstick of the physiological norm, the situation appears very grim.
- In the 50th round, only the upper 30 percentile expenditure group of 3 states in rural India and 5 states in urban India had consumption levels equal to or more than the norm. The bottom 30 percentile and the middle 40 percentile of none of the states could make it in both rural and urban areas.

- The situation became worse in the 61st Round when not even the upper 30 percentile expenditure group had the required consumption levels. For the bottom 30 percentile, their consumption levels are nowhere near especially in rural areas.
- The all-India average monthly per capita consumption of all MPCE classes for pulses (total) in rural areas was 0.76 kg in 1993-94 and fell to 0.674 kg in 2004-05. This fall was due to a fall in the consumption of pulses of all the three percentile groups.
- In urban areas, the all-India average was 0.86 kg in 1993-94 and fell to 0.783 kg in 2004-05. Like in rural areas, this fall was due to a fall in the consumption of all the three percentile groups. However, in urban areas, over the period of study, most of the states show an increase in consumption of pulses for the bottom 30 percentile expenditure group. Though, the average is on the left side of zero.
- There has been a sharp fall in the pulses consumption, over the period of study, for the bottom 30 percentile expenditure group in rural areas of Madhya Pradesh, Punjab, Haryana, Bihar and in urban areas of Rajasthan, Haryana, Madhya Pradesh and Punjab. Rural areas of Kerala and Orissa and urban areas of Kerala and Assam had an increase in the consumption of pulses for all the three percentile expenditure groups in the period of study.
- Except peas, all other pulses have shown a fall in consumption (average of all MPCE classes), over the period of study, in both rural and urban areas of the country. The situation is very similar for the consumption pattern of the upper 30 percentile expenditure group just that in this case there was a fall in even peas consumption in urban areas.

- In comparison to the above, the pattern of consumption of pulses in the bottom 30 percentile expenditure group is a little better. Gram, gram (split) and peas show a rise in consumption in both rural areas between 1993-94 and 2004-05. However, for all other pulses, there has been a fall in both rural and urban areas.

5.4: Important observations of Chapter 4 - THE PULSES ECONOMY OF INDIA: THE DEMAND-SUPPLY MISMATCH AND ITS NUTRITIONAL CONSEQUENCES (1993-94 to 2004-05)

This section summarises the important observations of the chapter to reveal the impact on protein nutrition due to the changing consumption pattern as partly observed in chapter 3.

- Proteins are body-building nutrients and are required in adequate quantities for healthy growth of the body. They are made up of amino acids not all of which can be made up in our body. Amino acids which need to be supplemented from food are called 'essential' amino acids.
- Animal and non-animal sources of proteins differ in quality and the former is superior source of protein as it contains all 'essential' amino acids. Non-animal sources generally lack in one or more of the same and hence various such sources need to be properly balanced in the diet to make up for each other's deficiencies.
- Normally a gram of protein is required per kg body weight. However the requirements of children, pregnant and lactating mothers are more. On an average, 50 to 60 gms of proteins are required per capita per day.

- Pulses are a very important source of protein especially for the vegetarian population of the country. Its protein content is far more than cereals. Soyabean has the highest protein content among pulses. Apart from being an important source of protein, pulses are also rich in several other micro-nutrients and also have high energy content comparable to cereals.
- NSSO provides data for protein intake under broad categories of its sources like 'cereals', 'pulses', 'egg, fish and meat', 'milk and milk products' and 'other foods'.
- Cereals are the most important source of protein for both rural (65-70%) and urban India though in urban India its share is comparatively lower (about 55-60%). States with lower per capita income and higher poverty show a higher intake of protein from cereals as the poor are especially dependent on it. Thus Bihar, Orissa, Madhya Pradesh, Uttar Pradesh etc. show very high protein intake from cereals while Punjab, Kerala etc. have a comparatively lower intake from cereals in both rural and urban areas. For most of the states and in both rural and urban areas, the share of cereals as a source of protein has fallen over the two rounds.
- Pulses contribute about 10 percent of the total intake of proteins in rural India. In Urban India, it is a couple of points higher. Consumption pattern influences the relative share of pulses in the different regions of India. It is quite high in the western and central part of the country which is largely vegetarian e.g. Madhya Pradesh, Gujarat and to some extent Maharashtra. West Bengal, Kerala and Assam with a large share of 'egg, fish and meat' show a relatively lower share for pulses. Also states like

Haryana and Rajasthan, which have a high share of protein intake from 'milk and milk products' show a lower share from pulses although they have one of the highest intakes of protein.

- Over the period of study, the share of pulses has fallen in both rural and urban India. Also if we consider the combined contribution of both cereals and pulses then this has fallen in most states in both rural and urban India. This shows the changing consumption basket as relative shares of 'other foods', 'milk and milk products' and 'egg, fish and meat' is increasing. Also their share is more in urban than in rural areas.
- North-western states of Punjab, Haryana and Rajasthan show a high average per capita per day intake of proteins in both rural and urban areas in both rounds. Also Uttar Pradesh and urban Bihar have high levels of protein intake in both periods. On the other hand, Tamil Nadu shows a very low level of protein intake in both rounds and for both rural (45 gms) and urban (49 gms) areas. Rest of the states had moderate levels of protein intake.
- Compared to the physiological norms of 50-60 gms per capita per day, the protein intake levels of the bottom 30 percentile population is very low. However bottom 30 percentile expenditure group of Haryana, Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar show levels close to the norm. Kerala (30-35 gms) and Tamil Nadu (35-37 gms) have very low levels of protein intake. This is the case in both rural and urban areas of the two states. Their protein intake levels are about half the physiological norms.
- Except Assam, Kerala and Maharashtra all other states have registered a decline in average per capita protein intake over the

period 1993-94 and 2004-05 in the rural areas. In urban India, the situation is more balanced with almost half the states registering a rise although the all-India average is on the left side of zero.

- For the bottom 30 percentile population, nutrition levels are much below the physiological norms. As far as the change in protein intake is concerned, the situation in rural and urban India is opposite. In rural areas, most of the states except Assam, Kerala and Gujarat witness a fall in protein intake. This a matter of grave concern as more than 70 percent of our population lives in rural areas. In urban areas, only five states, namely Haryana, Madhya Pradesh, Maharashtra, Rajasthan and West Bengal registered a fall. The other ten states registered a rise. The success of urban Gujarat has to be pointed out as protein intake increased by over 23% for the bottom 30 percentile expenditure group over the period. On an average, there was an increase of about 6.5 percent in protein intake of urban India in the period of our study.
- For the upper 30 percentile expenditure group, the changing consumption basket doesn't seem to have done well on the nutritional front. In rural areas, only Assam and Kerala witnessed a rise while there was a steep fall in the protein intakes of most other states. In Urban areas, apart from Assam and Kerala, four other states namely Bihar, Orissa, Punjab and Rajasthan saw rise in protein intake. Rest of the states witnessed a fall though the fall was moderate compared to rural areas.
- Kerala and Assam have registered an increase in protein intake in all the three percentile expenditure groups and in both urban and rural areas between 1993-94 and 2004-05.

- If we compare with the physiological norms, then the protein intake levels of only the upper 30 percentile expenditure group can be considered sufficient in most states. Otherwise the middle 40 is on the boundary and that of the bottom 30 percentile is below the physiological norms.
- The changing consumption pattern is influencing this already fragile situation rather negatively though the magnitude of the impact is different in rural and urban areas. Rural protein intake levels have fallen and the condition of the bottom 30 percentile expenditure group is particularly alarming. However, in urban India, the intake levels of proteins have been stagnant on an average but for the bottom 30 percentile expenditure group there has been an increase. Increase in consumption of pulses in urban areas (together with other dietary sources of proteins) has been instrumental in achieving this.

5.5: The Larger Perspective

The analysis in this dissertation has shown that there has been a significant mismatch between demand and supply in the pulses economy of India. This mismatch has had adverse consequences for the protein nutrition of the people, especially in rural areas.

The supply side of the pulses economy seems to have been caught in a low-level equilibrium trap for decades now. Actually, the problem is the malaise of dry-land farming. Still, six decades after independence, 60 percent of the gross cropped area is rainfed. Productivity levels for pulses have refused to increase in the absence of extension of irrigation

and technological breakthrough. A revolution similar to that seen in wheat, rice and to some extent oilseeds is long due.

With area under pulses also stagnating, production levels have shown abysmally low growth as we have observed in chapter 2. The per capita net availability, which gives a rough estimate of available supply, has now dropped to threatening levels. The fall would have been much more if not for the rising imports which have helplessly tried to match the excess demand.

However, it seems that the equilibrating role has been majorly played by prices, as we have seen in chapter 2. Rising prices affect both demand and supply sides. Theoretically, this should have a positive impact on the supply side as farmers would get incentivised with higher expected profits. Maybe, the improvement we have seen in the last decade is partially explained by this. It is an interesting question and studies on profitability of pulses production in this period would be able to give the correct answers whether higher wholesale and retail prices are percolating to the farmgate prices and influencing profit functions of the farmers.

On the demand side, higher prices must have crowded out the poor from the pulses market. This seems to be especially true, as our analysis has shown, for the majority of our population which lives in rural areas. The consumption of pulses for the bottom 30 percentile expenditure group has fallen in rural areas (also there has been a moderate fall in urban areas also).

There is a strong case against the 'diversification of the consumption basket' explanation for the above observed trend. This is also supported by the fact that for the bottom 30 percentile ✓

expenditure group, there has been a rise in the consumption of wheat (in both rural and urban areas) and rice (clear rise in rural areas and for almost half the states in urban areas). It may be the fact that rice and wheat are covered under the public distribution system which makes them cheaply available to the poorer sections, while the lack of similar availability in the case of pulses has led to a fall in its consumption as far as this section of the population is concerned.

Diversification of the consumption basket might be true for the higher and to some extent middle income groups and our analysis supports this explanation for these classes.

At this point, it is worth considering the merits of the methodology used in this dissertation which has divided the 12 expenditure classes into the bottom 30, middle 40 and upper 30 percentile expenditure classes. The levels and patterns of consumption and also the reasons for the same may be different for the different income groups and the one-size-fits-all explanations might just not be capturing the whole story.

Whatever be the real reason for the trends observed, the fact remains that the situation is turning from bad to worse. The protein nutrition levels of majority of India's population have fallen in the period of our study. For the upper 30 and the middle 40 percentile expenditure groups, the diversification has not gone well with protein nutrition. For the bottom 30 percentile it has fallen steeply in rural areas and risen in urban areas. Nevertheless, the consumption levels of the bottom 30 percentile expenditure group remain much below the required norms.

Thus, when macro level data of average protein nutrition are cited to make us believe that protein nutrition levels are at comfortable levels, the story looks different when analysed from the methodology of the three percentile groups. For e.g. the all-India average per capita per day intake of proteins fell from 60.2 gms in 1993-94 to 57 gms in 2004-05. As we had noted before, 50-60 gms is adequate and thus we are still at a comfortable level. Now consider the figures for the three percentile groups. For the upper 30 percentile, the all-India average fell from 75.7 gms to 70.1 gms in the same period. For the middle 40 the change was from 58.6 gms to 55.9 gms, and for the bottom 30 percentile group it fell from 46.8 to 45.6 gms. The last part gets scary when we take states like Kerala and Tamil Nadu which have 29.7 gms and 33.5 gms of protein intake in the 61st Round.

The current situation, thus is such that for the upper 30 percentile group which had a fairly high level of protein nutrition, the intake levels are falling but are still adequate. For the middle 40 percentile it was adequate and has fallen to just acceptable levels. For the bottom 30 percentile (even with its rise in urban areas) the nutrition levels are just not acceptable and would, if it continues this way, jeopardise the health of the population.

Hence it is high time that the government wakes up from its slumber, recognizes this impending crisis and takes preventive steps. Literature is overloaded with suggestions to improve the supply side. One thing is for sure that the productivity levels have to be accelerated at a rapid pace. We need to learn and adopt technologies of other major pulses producing countries that have such high yields as we have noted before. Technological breakthrough is a must and for that research has to be strengthened. We had noted that lack of

institutional support is a major reason for the observed stagnation. The government must revamp its pulses procurement policy and make the minimum support prices an effective instrument of transmission of policy signals to the pulses cultivators.

On the demand side, one of the ways is to include pulses in the public distribution system and thus in the food security bill. This suggestion may not go well with the prevailing policy paradigm but if implemented can correct the nutritional imbalances we have observed. The government must popularize pulses as a quality source of proteins and increase awareness about its health benefits to increase its share (it has fallen in the period of our study) from the current levels of about 10 percent.

Whether pulses are included in the food security basket or not, government can use other policies to increase its supply and keep its prices within the reach of the poor. In this regard, imports are a good idea but its sustainability is a matter of debate as India herself produces one-fourth of the world production.

Every crisis is an opportunity and it is high time to bring a tectonic shift in this sector, better late than never. As I conclude this dissertation, I recognise that this work has raised many more questions than it has answered. Nevertheless, it is a small but honest attempt to explore an important issue which has been largely ignored.

APPENDIX

Table 3.1								
AVERAGE MONTHLY PER CAPITA CONSUMPTION (K.G.) OF PULSES & PULSE PRODUCTS - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.700	0.440	0.650	1.020	0.700	0.494	0.616	0.939
ASSAM	0.510	0.360	0.490	0.700	0.612	0.331	0.546	0.835
BIHAR#	0.720	0.540	0.820	1.080	0.602	0.457	0.678	0.878
GUJARAT	0.870	0.570	0.770	1.100	0.758	0.539	0.683	0.958
HARYANA	0.620	0.370	0.540	0.730	0.560	0.300	0.457	0.642
KARNATAKA	0.790	0.590	0.790	1.010	0.705	0.565	0.720	0.887
KERALA	0.430	0.140	0.280	0.570	0.488	0.179	0.296	0.590
M.P.*	0.970	0.700	0.980	1.400	0.739	0.555	0.805	1.154
MAHARASHTRA	0.930	0.720	0.910	1.240	0.868	0.672	0.838	1.093
ORISSA	0.450	0.300	0.490	0.810	0.488	0.331	0.598	0.906
PUNJAB	0.890	0.530	0.730	0.970	0.736	0.428	0.609	0.817
RAJASTHAN	0.640	0.440	0.560	0.780	0.495	0.495	0.420	0.597
T.N.	0.680	0.390	0.640	1.020	0.733	0.490	0.686	0.990
U.P.^	0.980	0.700	0.970	1.300	0.828	0.618	0.803	1.117
W.B.	0.420	0.260	0.390	0.620	0.401	0.252	0.377	0.549
ALL INDIA	0.760	0.540	0.730	1.010	0.674	0.503	0.661	0.876
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.2			
AVERAGE MONTHLY PER CAPITA CONSUMPTION (K.G.) OF PULSES & PULSE PRODUCTS - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	92.11	43.14	63.73
ASSAM	67.11	51.43	70.00
BIHAR#	94.74	50.00	75.93
GUJARAT	114.47	51.82	70.00
HARYANA	81.58	50.68	73.97
KARNATAKA	103.95	58.42	78.22
KERALA	56.58	24.56	49.12
M.P.*	127.63	50.00	70.00
MAHARASHTRA	122.37	58.06	73.39
ORISSA	59.21	37.04	60.49
PUNJAB	117.11	54.64	75.26
RAJASTHAN	84.21	56.41	71.79
T.N.	89.47	38.24	62.75
U.P.^	128.95	53.85	74.62
W.B.	55.26	41.94	62.90
ALL INDIA	100.00	53.47	72.28
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.1

Table 3.3			
AVERAGE MONTHLY PER CAPITA CONSUMPTION (K.G.) OF PULSES & PULSE PRODUCTS - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	103.86	52.61	65.60
ASSAM	90.80	39.64	65.39
BIHAR#	89.32	52.05	77.22
GUJARAT	112.46	56.26	71.29
HARYANA	83.09	46.73	71.18
KARNATAKA	104.60	63.70	81.17
KERALA	72.40	30.34	50.17
M.P.*	109.64	48.09	69.76
MAHARASHTRA	128.78	61.48	76.67
ORISSA	72.40	36.53	66.00
PUNJAB	109.20	52.39	74.54
RAJASTHAN	73.44	82.91	70.35
T.N.	108.75	49.49	69.29
U.P.^	122.85	55.33	71.89
W.B.	59.50	45.90	68.67
ALL INDIA	100.00	57.42	75.46
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.1

Table 3.4				
AVERAGE MONTHLY PER CAPITA CONSUMPTION (K.G.) OF PULSES & PULSE PRODUCTS - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	0.00	12.27	-5.23	-7.94
ASSAM	20.00	-8.06	11.43	19.29
BIHAR#	-16.39	-15.37	-17.32	-18.70
GUJARAT	-12.87	-5.44	-11.30	-12.91
HARYANA	-9.68	-18.92	-15.37	-12.05
KARNATAKA	-10.76	-4.24	-8.86	-12.18
KERALA	13.49	27.86	5.71	3.51
M.P.*	-23.81	-20.71	-17.86	-17.57
MAHARASHTRA	-6.67	-6.67	-7.91	-11.85
ORISSA	8.44	10.33	22.04	11.85
PUNJAB	-17.30	-19.25	-16.58	-15.77
RAJASTHAN	-22.66	12.50	-25.00	-23.46
T.N.	7.79	25.64	7.19	-2.94
U.P.^	-15.51	-11.71	-17.22	-14.08
W.B.	-4.52	-3.08	-3.33	-11.45
ALL INDIA	-11.32	-6.85	-9.45	-13.27
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.1

Table 3.5								
AVERAGE MONTHLY PER CAPITA CONSUMPTION (K.G.) OF PULSES & PULSE PRODUCTS - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.850	0.540	0.870	1.260	0.797	0.535	0.780	1.142
ASSAM	0.720	0.490	0.640	0.990	0.750	0.495	0.704	1.011
BIHAR#	0.790	0.590	0.850	1.170	0.769	0.601	0.797	1.138
GUJARAT	0.940	0.620	0.910	1.200	0.901	0.651	0.852	1.077
HARYANA	0.710	0.480	0.680	0.880	0.653	0.398	0.597	0.885
KARNATAKA	0.880	0.640	0.920	1.100	0.827	0.647	0.805	1.031
KERALA	0.480	0.220	0.430	0.740	0.530	0.235	0.431	0.792
M.P.*	1.030	0.750	1.070	1.370	0.863	0.660	0.964	1.105
MAHARASHTRA	0.930	0.680	0.910	1.100	0.887	0.686	0.896	1.020
ORISSA	0.730	0.390	0.750	1.150	0.689	0.465	0.769	1.120
PUNJAB	0.930	0.670	0.850	1.110	0.797	0.600	0.770	0.916
RAJASTHAN	0.710	0.470	0.690	0.970	0.499	0.386	0.510	0.665
T.N.	0.850	0.510	0.860	1.270	0.894	0.606	0.854	1.167
U.P.^	0.940	0.690	0.980	1.270	0.823	0.651	0.858	1.146
W.B.	0.590	0.390	0.590	0.750	0.537	0.380	0.536	0.668
ALL INDIA	0.860	0.590	0.850	1.130	0.783	0.581	0.778	0.993
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.6			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PULSES & PULSE PRODUCTS - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	98.84	42.86	69.05
ASSAM	83.72	49.49	64.65
BIHAR#	91.86	50.43	72.65
GUJARAT	109.30	51.67	75.83
HARYANA	82.56	54.55	77.27
KARNATAKA	102.33	58.18	83.64
KERALA	55.81	29.73	58.11
M.P.*	119.77	54.74	78.10
MAHARASHTRA	108.14	61.82	82.73
ORISSA	84.88	33.91	65.22
PUNJAB	108.14	60.36	76.58
RAJASTHAN	82.56	48.45	71.13
T.N.	98.84	40.16	67.72
U.P.^	109.30	54.33	77.17
W.B.	68.60	52.00	78.67
ALL INDIA	100.00	52.21	75.22
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.5

Table 3.7			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PULSES & PULSE PRODUCTS - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	101.79	46.85	68.30
ASSAM	95.79	48.96	69.63
BIHAR#	98.21	52.81	70.04
GUJARAT	115.07	60.45	79.11
HARYANA	83.40	44.97	67.46
KARNATAKA	105.62	62.75	78.08
KERALA	67.69	29.67	54.42
M.P.*	110.22	59.73	87.24
MAHARASHTRA	113.28	67.25	87.84
ORISSA	87.99	41.52	68.66
PUNJAB	101.79	65.50	84.06
RAJASTHAN	63.73	58.05	76.69
T.N.	114.18	51.93	73.18
U.P.^	105.11	56.81	74.87
W.B.	68.58	56.89	80.24
ALL INDIA	100.00	58.51	78.35
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.5

Table 3.8				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PULSES & PULSE PRODUCTS - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-6.24	-0.93	-10.34	-9.37
ASSAM	4.17	1.02	10.00	2.12
BIHAR#	-2.66	1.86	-6.24	-2.74
GUJARAT	-4.15	5.00	-6.37	-10.25
HARYANA	-8.03	-17.08	-12.21	0.57
KARNATAKA	-6.02	1.09	-12.50	-6.27
KERALA	10.42	6.82	0.23	7.03
M.P.*	-16.21	-12.00	-9.91	-19.34
MAHARASHTRA	-4.62	0.88	-1.54	-7.27
ORISSA	-5.62	19.23	2.53	-2.61
PUNJAB	-14.30	-10.45	-9.41	-17.48
RAJASTHAN	-29.72	-17.87	-26.09	-31.44
T.N.	5.18	18.82	-0.70	-8.11
U.P.^	-12.45	-5.65	-12.45	-9.76
W.B.	-8.98	-2.56	-9.15	-10.93
ALL INDIA	-8.95	-1.53	-8.47	-12.12
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.5

Table 3.9								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT – RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.050	0.020	0.040	0.080	0.050	0.024	0.043	0.075
ASSAM	0.000	0.000	0.000	0.010	0.010	0.006	0.006	0.018
BIHAR#	0.030	0.010	0.030	0.090	0.052	0.029	0.065	0.095
GUJARAT	0.060	0.030	0.050	0.080	0.050	0.028	0.043	0.071
HARYANA	0.140	0.090	0.130	0.160	0.132	0.071	0.111	0.149
KARNATAKA	0.070	0.040	0.080	0.090	0.062	0.046	0.062	0.088
KERALA	0.000	0.000	0.000	0.000	0.010	0.009	0.008	0.010
M.P.*	0.080	0.050	0.080	0.110	0.074	0.052	0.074	0.138
MAHARASHTRA	0.120	0.070	0.130	0.180	0.153	0.076	0.145	0.238
ORISSA	0.020	0.020	0.020	0.030	0.017	0.014	0.015	0.034
PUNJAB	0.190	0.090	0.160	0.210	0.136	0.074	0.107	0.154
RAJASTHAN	0.130	0.100	0.110	0.170	0.078	0.048	0.073	0.098
T.N.	0.050	0.030	0.040	0.070	0.058	0.041	0.051	0.078
U.P.^	0.050	0.030	0.040	0.080	0.038	0.021	0.037	0.062
W.B.	0.010	0.000	0.000	0.010	0.011	0.008	0.010	0.014
ALL INDIA	0.060	0.030	0.050	0.100	0.058	0.033	0.055	0.088
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.10			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT – RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	83.33	25.00	50.00
ASSAM	0.00	0.00	0.00
BIHAR#	50.00	11.11	33.33
GUJARAT	100.00	37.50	62.50
HARYANA	233.33	56.25	81.25
KARNATAKA	116.67	44.44	88.89
KERALA	0.00	#DIV/0!	#DIV/0!
M.P.*	133.33	45.45	72.73
MAHARASHTRA	200.00	38.89	72.22
ORISSA	33.33	66.67	66.67
PUNJAB	316.67	42.86	76.19
RAJASTHAN	216.67	58.82	64.71
T.N.	83.33	42.86	57.14
U.P.^	83.33	37.50	50.00
W.B.	16.67	0.00	0.00
ALL INDIA	100.00	30.00	50.00
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.9

Table 3.11			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	86.21	32.00	57.33
ASSAM	17.24	33.33	33.33
BIHAR#	89.66	30.53	68.42
GUJARAT	86.21	39.44	60.56
HARYANA	227.59	47.65	74.50
KARNATAKA	106.90	52.27	70.45
KERALA	17.24	90.00	80.00
M.P.*	127.59	37.68	53.62
MAHARASHTRA	263.79	31.93	60.92
ORISSA	29.31	41.18	44.12
PUNJAB	234.48	48.05	69.48
RAJASTHAN	134.48	48.98	74.49
T.N.	100.00	52.56	65.38
U.P.^	65.52	33.87	59.68
W.B.	18.97	57.14	71.43
ALL INDIA	100.00	37.50	62.50
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.9

Table 3.12				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	0.00	20.00	7.50	-6.25
ASSAM	#DIV/0!	#DIV/0!	#DIV/0!	80.00
BIHAR#	73.33	190.00	116.67	5.56
GUJARAT	-16.67	-6.67	-14.00	-11.25
HARYANA	-5.71	-21.11	-14.62	-6.88
KARNATAKA	-11.43	15.00	-22.50	-2.22
KERALA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
M.P.*	-7.50	4.00	-7.50	25.45
MAHARASHTRA	27.50	8.57	11.54	32.22
ORISSA	-15.00	-30.00	-25.00	13.33
PUNJAB	-28.42	-17.78	-33.13	-26.67
RAJASTHAN	-40.00	-52.00	-33.64	-42.35
T.N.	16.00	36.67	27.50	11.43
U.P.^	-24.00	-30.00	-7.50	-22.50
W.B.	10.00	#DIV/0!	#DIV/0!	40.00
ALL INDIA	-3.33	10.00	10.00	-12.00
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.9

Table 3.13								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.070	0.040	0.070	0.120	0.055	0.031	0.052	0.089
ASSAM	0.040	0.020	0.030	0.070	0.019	0.007	0.015	0.034
BIHAR#	0.050	0.020	0.060	0.110	0.096	0.062	0.100	0.178
GUJARAT	0.070	0.040	0.060	0.100	0.065	0.047	0.060	0.080
HARYANA	0.120	0.080	0.120	0.160	0.122	0.077	0.112	0.133
KARNATAKA	0.070	0.040	0.080	0.080	0.066	0.044	0.069	0.084
KERALA	0.010	0.000	0.000	0.010	0.007	0.008	0.005	0.007
M.P.*	0.070	0.050	0.080	0.090	0.057	0.034	0.065	0.094
MAHARASHTRA	0.110	0.070	0.110	0.130	0.123	0.101	0.125	0.137
ORISSA	0.020	0.010	0.020	0.030	0.018	0.010	0.017	0.037
PUNJAB	0.170	0.120	0.160	0.180	0.137	0.114	0.130	0.155
RAJASTHAN	0.120	0.070	0.130	0.150	0.078	0.078	0.074	0.085
T.N.	0.070	0.040	0.060	0.120	0.075	0.044	0.069	0.108
U.P.^	0.060	0.030	0.070	0.100	0.109	0.084	0.124	0.139
W.B.	0.020	0.010	0.020	0.050	0.022	0.018	0.015	0.034
ALL INDIA	0.080	0.040	0.070	0.110	0.073	0.052	0.073	0.096
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.14			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	87.50	33.33	58.33
ASSAM	50.00	28.57	42.86
BIHAR#	62.50	18.18	54.55
GUJARAT	87.50	40.00	60.00
HARYANA	150.00	50.00	75.00
KARNATAKA	87.50	50.00	100.00
KERALA	12.50	0.00	0.00
M.P.*	87.50	55.56	88.89
MAHARASHTRA	137.50	53.85	84.62
ORISSA	25.00	33.33	66.67
PUNJAB	212.50	66.67	88.89
RAJASTHAN	150.00	46.67	86.67
T.N.	87.50	33.33	50.00
U.P.^	75.00	30.00	70.00
W.B.	25.00	20.00	40.00
ALL INDIA	100.00	36.36	63.64
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.13

Table 3.15			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	75.34	34.83	58.43
ASSAM	26.03	20.59	44.12
BIHAR#	131.51	34.83	56.18
GUJARAT	89.04	58.75	75.00
HARYANA	167.12	57.89	84.21
KARNATAKA	90.41	52.38	82.14
KERALA	9.59	114.29	71.43
M.P.*	78.08	36.17	69.15
MAHARASHTRA	168.49	73.72	91.24
ORISSA	24.66	27.03	45.95
PUNJAB	187.67	73.55	83.87
RAJASTHAN	106.85	91.76	87.06
T.N.	102.74	40.74	63.89
U.P.^	149.32	60.43	89.21
W.B.	30.14	52.94	44.12
ALL INDIA	100.00	54.17	76.04
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.13

Table 3.16				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM SPLIT - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-21.43	-22.50	-25.71	-25.83
ASSAM	-52.50	-65.00	-50.00	-51.43
BIHAR#	92.00	210.00	66.67	61.82
GUJARAT	-7.14	17.50	0.00	-20.00
HARYANA	1.67	-3.75	-6.67	-16.88
KARNATAKA	-5.71	10.00	-13.75	5.00
KERALA	-30.00	#DIV/0!	#DIV/0!	-30.00
M.P.*	-18.57	-32.00	-18.75	4.44
MAHARASHTRA	11.82	44.29	13.64	5.38
ORISSA	-10.00	0.00	-15.00	23.33
PUNJAB	-19.41	-5.00	-18.75	-13.89
RAJASTHAN	-35.00	11.43	-43.08	-43.33
T.N.	7.14	10.00	15.00	-10.00
U.P.^	81.67	180.00	77.14	39.00
W.B.	10.00	80.00	-25.00	-32.00
ALL INDIA	-8.75	30.00	4.29	-12.73
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.13

Table 3.17								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.000	0.000	0.000	0.000	0.004	0.002	0.002	0.008
ASSAM	0.020	0.010	0.010	0.030	0.009	0.006	0.005	0.016
BIHAR#	0.070	0.020	0.080	0.210	0.069	0.040	0.077	0.146
GUJARAT	0.030	0.020	0.030	0.040	0.018	0.011	0.018	0.023
HARYANA	0.060	0.010	0.030	0.090	0.029	0.002	0.013	0.041
KARNATAKA	0.030	0.020	0.030	0.060	0.058	0.036	0.069	0.067
KERALA	0.070	0.020	0.040	0.090	0.099	0.040	0.067	0.116
M.P.*	0.060	0.020	0.090	0.070	0.020	0.012	0.025	0.036
MAHARASHTRA	0.020	0.010	0.030	0.040	0.011	0.009	0.011	0.015
ORISSA	0.010	0.010	0.010	0.020	0.009	0.008	0.009	0.011
PUNJAB	0.090	0.020	0.040	0.110	0.103	0.046	0.076	0.119
RAJASTHAN	0.030	0.020	0.020	0.030	0.013	0.006	0.011	0.017
T.N.	0.040	0.010	0.040	0.060	0.043	0.023	0.037	0.066
U.P.^	0.070	0.030	0.060	0.130	0.025	0.013	0.024	0.040
W.B.	0.010	0.000	0.010	0.020	0.006	0.002	0.005	0.012
ALL INDIA	0.040	0.010	0.040	0.070	0.031	0.017	0.029	0.047
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.18			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0.00	#DIV/0!	#DIV/0!
ASSAM	50.00	33.33	33.33
BIHAR#	175.00	9.52	38.10
GUJARAT	75.00	50.00	75.00
HARYANA	150.00	11.11	33.33
KARNATAKA	75.00	33.33	50.00
KERALA	175.00	22.22	44.44
M.P.*	150.00	28.57	128.57
MAHARASHTRA	50.00	25.00	75.00
ORISSA	25.00	50.00	50.00
PUNJAB	225.00	18.18	36.36
RAJASTHAN	75.00	66.67	66.67
T.N.	100.00	16.67	66.67
U.P.^	175.00	23.08	46.15
W.B.	25.00	0.00	50.00
ALL INDIA	100.00	14.29	57.14
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.17

Table 3.19			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	12.90	25.00	25.00
ASSAM	29.03	37.50	31.25
BIHAR#	222.58	27.40	52.74
GUJARAT	58.06	47.83	78.26
HARYANA	93.55	4.88	31.71
KARNATAKA	187.10	53.73	102.99
KERALA	319.35	34.48	57.76
M.P.*	64.52	33.33	69.44
MAHARASHTRA	35.48	60.00	73.33
ORISSA	29.03	72.73	81.82
PUNJAB	332.26	38.66	63.87
RAJASTHAN	41.94	35.29	64.71
T.N.	138.71	34.85	56.06
U.P.^	80.65	32.50	60.00
W.B.	19.35	16.67	41.67
ALL INDIA	100.00	36.17	61.70
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.17

Table 3.20				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ASSAM	-55.00	-40.00	-50.00	-46.67
BIHAR#	-1.43	100.00	-3.75	-30.48
GUJARAT	-40.00	-45.00	-40.00	-42.50
HARYANA	-51.67	-80.00	-56.67	-54.44
KARNATAKA	93.33	80.00	130.00	11.67
KERALA	41.43	100.00	67.50	28.89
M.P.*	-66.67	-40.00	-72.22	-48.57
MAHARASHTRA	-45.00	-10.00	-63.33	-62.50
ORISSA	-10.00	-20.00	-10.00	-45.00
PUNJAB	14.44	130.00	90.00	8.18
RAJASTHAN	-56.67	-70.00	-45.00	-43.33
T.N.	7.50	130.00	-7.50	10.00
U.P.^	-64.29	-56.67	-60.00	-69.23
W.B.	-40	#DIV/0!	-50	-40
ALL INDIA	-22.5	70	-27.5	-32.86
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.17

Table 3.21								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.000	0.000	0.000	0.010	0.006	0.003	0.006	0.008
ASSAM	0.050	0.010	0.040	0.100	0.024	0.007	0.019	0.044
BIHAR#	0.170	0.080	0.200	0.300	0.111	0.061	0.110	0.239
GUJARAT	0.040	0.010	0.030	0.060	0.034	0.014	0.030	0.050
HARYANA	0.100	0.040	0.070	0.180	0.049	0.009	0.034	0.094
KARNATAKA	0.050	0.030	0.050	0.070	0.059	0.046	0.053	0.078
KERALA	0.100	0.060	0.090	0.140	0.111	0.067	0.103	0.145
M.P.*	0.040	0.010	0.040	0.100	0.020	0.013	0.026	0.026
MAHARASHTRA	0.040	0.010	0.030	0.070	0.026	0.011	0.024	0.040
ORISSA	0.030	0.010	0.020	0.050	0.014	0.010	0.017	0.037
PUNJAB	0.110	0.050	0.100	0.150	0.106	0.068	0.106	0.123
RAJASTHAN	0.020	0.010	0.020	0.030	0.008	0.005	0.009	0.010
T.N.	0.050	0.030	0.050	0.090	0.058	0.035	0.055	0.080
U.P.^	0.060	0.020	0.070	0.140	0.032	0.012	0.035	0.067
W.B.	0.030	0.010	0.030	0.040	0.014	0.007	0.014	0.018
ALL INDIA	0.050	0.020	0.050	0.090	0.041	0.021	0.040	0.063
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.22			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM – URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0.00	0.00	0.00
ASSAM	100.00	10.00	40.00
BIHAR#	340.00	26.67	66.67
GUJARAT	80.00	16.67	50.00
HARYANA	200.00	22.22	38.89
KARNATAKA	100.00	42.86	71.43
KERALA	200.00	42.86	64.29
M.P.*	80.00	10.00	40.00
MAHARASHTRA	80.00	14.29	42.86
ORISSA	60.00	20.00	40.00
PUNJAB	220.00	33.33	66.67
RAJASTHAN	40.00	33.33	66.67
T.N.	100.00	33.33	55.56
U.P.^	120.00	14.29	50.00
W.B.	60.00	25.00	75.00
ALL INDIA	100.00	22.22	55.56
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.21

Table 3.23			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM – URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	14.63	37.50	75.00
ASSAM	58.54	15.91	43.18
BIHAR#	270.73	25.52	46.03
GUJARAT	82.93	28.00	60.00
HARYANA	119.51	9.57	36.17
KARNATAKA	143.90	58.97	67.95
KERALA	270.73	46.21	71.03
M.P.*	48.78	50.00	100.00
MAHARASHTRA	63.41	27.50	60.00
ORISSA	34.15	27.03	45.95
PUNJAB	258.54	55.28	86.18
RAJASTHAN	19.51	50.00	90.00
T.N.	141.46	43.75	68.75
U.P.^	78.05	17.91	52.24
W.B.	34.15	38.89	77.78
ALL INDIA	100.00	33.33	63.49
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.21

Table 3.24				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF GRAM – URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!	-20
ASSAM	-52.00	-30.00	-52.50	-56.00
BIHAR#	-34.71	-23.75	-45.00	-20.33
GUJARAT	-15.00	40.00	0.00	-16.67
HARYANA	-51.00	-77.50	-51.43	-47.78
KARNATAKA	18.00	53.33	6.00	11.43
KERALA	11.00	11.67	14.44	3.57
M.P.*	-50.00	30.00	-35.00	-74.00
MAHARASHTRA	-35.00	10.00	-20.00	-42.86
ORISSA	-53.33	0.00	-15.00	-26.00
PUNJAB	-3.64	36.00	6.00	-18.00
RAJASTHAN	-60.00	-50.00	-55.00	-66.67
T.N.	16.00	16.67	10.00	-11.11
U.P.^	-46.67	-40.00	-50.00	-52.14
W.B.	-53.33	-30.00	-53.33	-55.00
ALL INDIA	-18.00	5.00	-20.00	-30.00
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.21

Table 3.25								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.350	0.240	0.340	0.480	0.425	0.349	0.391	0.516
ASSAM	0.020	0.010	0.020	0.050	0.034	0.006	0.025	0.509
BIHAR#	0.120	0.050	0.140	0.320	0.090	0.037	0.105	0.236
GUJARAT	0.350	0.220	0.310	0.460	0.347	0.273	0.319	0.417
HARYANA	0.010	0.000	0.010	0.020	0.013	0.002	0.002	0.019
KARNATAKA	0.320	0.260	0.320	0.400	0.326	0.299	0.330	0.359
KERALA	0.110	0.040	0.070	0.140	0.105	0.040	0.063	0.126
M.P.*	0.320	0.180	0.320	0.580	0.289	0.169	0.347	0.527
MAHARASHTRA	0.350	0.260	0.350	0.470	0.389	0.340	0.382	0.444
ORISSA	0.060	0.020	0.060	0.210	0.117	0.058	0.143	0.304
PUNJAB	0.020	0.020	0.020	0.020	0.010	0.006	0.007	0.012
RAJASTHAN	0.010	0.010	0.010	0.020	0.011	0.012	0.011	0.011
T.N.	0.320	0.200	0.300	0.450	0.329	0.246	0.311	0.419
U.P.^	0.430	0.310	0.440	0.560	0.287	0.192	0.285	0.405
W.B.	0.000	0.000	0.000	0.000	0.006	0.003	0.007	0.007
ALL INDIA	0.230	0.170	0.230	0.320	0.209	0.155	0.208	0.263
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.26			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	152.17	50.00	70.83
ASSAM	8.70	20.00	40.00
BIHAR#	52.17	15.63	43.75
GUJARAT	152.17	47.83	67.39
HARYANA	4.35	0.00	50.00
KARNATAKA	139.13	65.00	80.00
KERALA	47.83	28.57	50.00
M.P.*	139.13	31.03	55.17
MAHARASHTRA	152.17	55.32	74.47
ORISSA	26.09	9.52	28.57
PUNJAB	8.70	100.00	100.00
RAJASTHAN	4.35	50.00	50.00
T.N.	139.13	44.44	66.67
U.P.^	186.96	55.36	78.57
W.B.	0	#DIV/0!	#DIV/0!
ALL INDIA	100.00	53.13	71.88
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.25

Table 3.27			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	203.35	67.64	75.78
ASSAM	16.27	1.18	4.91
BIHAR#	43.06	15.68	44.49
GUJARAT	166.03	65.47	76.50
HARYANA	6.22	10.53	10.53
KARNATAKA	155.98	83.29	91.92
KERALA	50.24	31.75	50.00
M.P.*	138.28	32.07	65.84
MAHARASHTRA	186.12	76.58	86.04
ORISSA	55.98	19.08	47.04
PUNJAB	4.78	50.00	58.33
RAJASTHAN	5.26	109.09	100.00
T.N.	157.42	58.71	74.22
U.P.^	137.32	47.41	70.37
W.B.	2.87	42.86	100.00
ALL INDIA	100.00	58.94	79.09
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.25

Table 3.28				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	21.43	45.42	15.00	7.50
ASSAM	70.00	-40.00	25.00	918.00
BIHAR#	-25.00	-26.00	-25.00	-26.25
GUJARAT	-0.86	24.09	2.90	-9.35
HARYANA	30.00	#DIV/0!	-80.00	-5.00
KARNATAKA	1.88	15.00	3.13	-10.25
KERALA	-4.55	0.00	-10.00	-10.00
M.P.*	-9.69	-6.11	8.44	-9.14
MAHARASHTRA	11.14	30.77	9.14	-5.53
ORISSA	95.00	190.00	138.33	44.76
PUNJAB	-50.00	-70.00	-65.00	-40.00
RAJASTHAN	10.00	20.00	10.00	-45.00
T.N.	2.81	23.00	3.67	-6.89
U.P.^	-33.26	-38.06	-35.23	-27.68
W.B.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ALL INDIA	-9.13	-8.82	-9.57	-17.81
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.25

Table 3.29								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.430	0.310	0.440	0.600	0.448	0.352	0.452	0.559
ASSAM	0.070	0.030	0.060	0.070	0.071	0.022	0.058	0.126
BIHAR#	0.270	0.140	0.320	0.490	0.216	0.093	0.253	0.459
GUJARAT	0.410	0.240	0.400	0.550	0.421	0.312	0.385	0.516
HARYANA	0.070	0.040	0.070	0.080	0.049	0.036	0.054	0.050
KARNATAKA	0.410	0.300	0.420	0.520	0.389	0.331	0.372	0.468
KERALA	0.120	0.060	0.110	0.170	0.129	0.069	0.113	0.178
M.P.*	0.530	0.350	0.570	0.740	0.485	0.339	0.578	0.626
MAHARASHTRA	0.420	0.280	0.420	0.510	0.408	0.325	0.424	0.450
ORISSA	0.320	0.090	0.330	0.610	0.332	0.167	0.417	0.613
PUNJAB	0.060	0.030	0.030	0.090	0.041	0.028	0.044	0.044
RAJASTHAN	0.060	0.030	0.050	0.110	0.027	0.006	0.025	0.063
T.N.	0.380	0.250	0.380	0.520	0.383	0.281	0.370	0.480
U.P.^	0.420	0.310	0.450	0.540	0.320	0.227	0.331	0.507
W.B.	0.060	0.030	0.060	0.090	0.036	0.017	0.042	0.047
ALL INDIA	0.330	0.230	0.330	0.410	0.295	0.220	0.300	0.364
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.30			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	130.30	51.67	73.33
ASSAM	21.21	42.86	85.71
BIHAR#	81.82	28.57	65.31
GUJARAT	124.24	43.64	72.73
HARYANA	21.21	50.00	87.50
KARNATAKA	124.24	57.69	80.77
KERALA	36.36	35.29	64.71
M.P.*	160.61	47.30	77.03
MAHARASHTRA	127.27	54.90	82.35
ORISSA	96.97	14.75	54.10
PUNJAB	18.18	33.33	33.33
RAJASTHAN	18.18	27.27	45.45
T.N.	115.15	48.08	73.08
U.P.^	127.27	57.41	83.33
W.B.	18.18	33.33	66.67
ALL INDIA	100.00	56.10	80.49
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.29

Table 3.31			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	151.86	62.97	80.86
ASSAM	24.07	17.46	46.03
BIHAR#	73.22	20.26	55.12
GUJARAT	142.71	60.47	74.61
HARYANA	16.61	72.00	108.00
KARNATAKA	131.86	70.73	79.49
KERALA	43.73	38.76	63.48
M.P.*	164.41	54.15	92.33
MAHARASHTRA	138.31	72.22	94.22
ORISSA	112.54	27.24	68.03
PUNJAB	13.90	63.64	100.00
RAJASTHAN	9.15	9.52	39.68
T.N.	129.83	58.54	77.08
U.P.^	108.47	44.77	65.29
W.B.	12.20	36.17	89.36
ALL INDIA	100.00	60.44	82.42
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.29

Table 3.32				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF ARHAR - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	4.19	13.55	2.73	-6.83
ASSAM	1.43	-26.67	-3.33	80.00
BIHAR#	-20.00	-33.57	-20.94	-6.33
GUJARAT	2.68	30.00	-3.75	-6.18
HARYANA	-30.00	-10.00	-22.86	-37.50
KARNATAKA	-5.12	10.33	-11.43	-10.00
KERALA	7.50	15.00	2.73	4.71
M.P.*	-8.49	-3.14	1.40	-15.41
MAHARASHTRA	-2.86	16.07	0.95	-11.76
ORISSA	3.75	85.56	26.36	0.49
PUNJAB	-31.67	-6.67	46.67	-51.11
RAJASTHAN	-55.00	-80.00	-50.00	-42.73
T.N.	0.79	12.40	-2.63	-7.69
U.P.^	-23.81	-26.77	-26.44	-6.11
W.B.	-40.00	-43.33	-30.00	-47.78
ALL INDIA	-10.61	-4.35	-9.09	-11.22
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.29

Table 3.33								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.180	0.120	0.180	0.230	0.089	0.070	0.092	0.099
ASSAM	0.070	0.020	0.060	0.130	0.120	0.029	0.094	0.200
BIHAR#	0.060	0.030	0.080	0.110	0.062	0.039	0.067	0.132
GUJARAT	0.300	0.240	0.280	0.340	0.218	0.144	0.208	0.270
HARYANA	0.140	0.090	0.120	0.180	0.126	0.092	0.112	0.137
KARNATAKA	0.090	0.070	0.090	0.130	0.083	0.064	0.086	0.104
KERALA	0.090	0.020	0.050	0.130	0.114	0.038	0.068	0.137
M.P.*	0.100	0.070	0.100	0.140	0.068	0.040	0.077	0.136
MAHARASHTRA	0.140	0.120	0.130	0.170	0.127	0.097	0.125	0.160
ORISSA	0.160	0.080	0.200	0.300	0.179	0.124	0.239	0.280
PUNJAB	0.210	0.150	0.180	0.230	0.188	0.152	0.178	0.196
RAJASTHAN	0.210	0.110	0.200	0.270	0.203	0.312	0.160	0.212
T.N.	0.060	0.030	0.050	0.090	0.068	0.044	0.064	0.094
U.P.^	0.040	0.020	0.030	0.060	0.031	0.017	0.030	0.050
W.B.	0.060	0.010	0.040	0.130	0.054	0.015	0.045	0.097
ALL INDIA	0.100	0.060	0.100	0.160	0.092	0.060	0.087	0.131
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.34			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	180.00	52.17	78.26
ASSAM	70.00	15.38	46.15
BIHAR#	60.00	27.27	72.73
GUJARAT	300.00	70.59	82.35
HARYANA	140.00	50.00	66.67
KARNATAKA	90.00	53.85	69.23
KERALA	90.00	15.38	38.46
M.P.*	100.00	50.00	71.43
MAHARASHTRA	140.00	70.59	76.47
ORISSA	160.00	26.67	66.67
PUNJAB	210.00	65.22	78.26
RAJASTHAN	210.00	40.74	74.07
T.N.	60.00	33.33	55.56
U.P.^	40.00	33.33	50.00
W.B.	60.00	7.69	30.77
ALL INDIA	100.00	37.50	62.50
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.33

Table 3.35			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	96.74	70.71	92.93
ASSAM	130.43	14.50	47.00
BIHAR#	67.39	29.55	50.76
GUJARAT	236.96	53.33	77.04
HARYANA	136.96	67.15	81.75
KARNATAKA	90.22	61.54	82.69
KERALA	123.91	27.74	49.64
M.P.*	73.91	29.41	56.62
MAHARASHTRA	138.04	60.63	78.13
ORISSA	194.57	44.29	85.36
PUNJAB	204.35	77.55	90.82
RAJASTHAN	220.65	147.17	75.47
T.N.	73.91	46.81	68.09
U.P.^	33.70	34.00	60.00
W.B.	58.70	15.46	46.39
ALL INDIA	100.00	45.80	66.41
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.33

Table 3.36				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-50.56	-41.67	-48.89	-56.96
ASSAM	71.43	45.00	56.67	53.85
BIHAR#	3.33	30.00	-16.25	20.00
GUJARAT	-27.33	-40.00	-25.71	-20.59
HARYANA	-10.00	2.22	-6.67	-23.89
KARNATAKA	-7.78	-8.57	-4.44	-20.00
KERALA	26.67	90.00	36.00	5.38
M.P.*	-32.00	-42.86	-23.00	-2.86
MAHARASHTRA	-9.29	-19.17	-3.85	-5.88
ORISSA	11.88	55.00	19.50	-6.67
PUNJAB	-10.48	1.33	-1.11	-14.78
RAJASTHAN	-3.33	183.64	-20.00	-21.48
T.N.	13.33	46.67	28.00	4.44
U.P.^	-22.50	-15.00	0.00	-16.67
W.B.	-10.00	50.00	12.50	-25.38
ALL INDIA	-8.00	0.00	-13.00	-18.13
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.33

Table 3.37								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.140	0.110	0.150	0.170	0.075	0.057	0.072	0.104
ASSAM	0.170	0.050	0.150	0.280	0.150	0.077	0.144	0.212
BIHAR#	0.060	0.030	0.060	0.130	0.071	0.052	0.074	0.110
GUJARAT	0.290	0.260	0.290	0.300	0.202	0.185	0.220	0.185
HARYANA	0.180	0.120	0.170	0.220	0.136	0.094	0.126	0.176
KARNATAKA	0.100	0.070	0.100	0.120	0.078	0.081	0.073	0.083
KERALA	0.120	0.050	0.110	0.180	0.124	0.055	0.103	0.184
M.P.*	0.140	0.100	0.140	0.180	0.112	0.085	0.119	0.158
MAHARASHTRA	0.140	0.110	0.140	0.160	0.140	0.101	0.144	0.163
ORISSA	0.190	0.130	0.210	0.230	0.142	0.132	0.145	0.161
PUNJAB	0.210	0.170	0.200	0.240	0.183	0.147	0.179	0.204
RAJASTHAN	0.230	0.170	0.230	0.280	0.179	0.155	0.182	0.213
T.N.	0.080	0.040	0.080	0.130	0.095	0.070	0.086	0.125
U.P.^	0.060	0.030	0.070	0.110	0.054	0.038	0.055	0.088
W.B.	0.130	0.060	0.120	0.190	0.108	0.045	0.097	0.171
ALL INDIA	0.140	0.090	0.130	0.180	0.114	0.078	0.115	0.149
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.38			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	100.00	64.71	88.24
ASSAM	121.43	17.86	53.57
BIHAR#	42.86	23.08	46.15
GUJARAT	207.14	86.67	96.67
HARYANA	128.57	54.55	77.27
KARNATAKA	71.43	58.33	83.33
KERALA	85.71	27.78	61.11
M.P.*	100.00	55.56	77.78
MAHARASHTRA	100.00	68.75	87.50
ORISSA	135.71	56.52	91.30
PUNJAB	150.00	70.83	83.33
RAJASTHAN	164.29	60.71	82.14
T.N.	57.14	30.77	61.54
U.P.^	42.86	27.27	63.64
W.B.	92.86	31.58	63.16
ALL INDIA	100.00	50.00	72.22
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.37

Table 3.39			
AVERAGE MONTHLY PER-CAPITA CONSUMPTION(K.G.) OF MOONG - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	65.79	54.81	69.23
ASSAM	131.58	36.32	67.92
BIHAR#	62.28	47.27	67.27
GUJARAT	177.19	100.00	118.92
HARYANA	119.30	53.41	71.59
KARNATAKA	68.42	97.59	87.95
KERALA	108.77	29.89	55.98
M.P.*	98.25	53.80	75.32
MAHARASHTRA	122.81	61.96	88.34
ORISSA	124.56	81.99	90.06
PUNJAB	160.53	72.06	87.75
RAJASTHAN	157.02	72.77	85.45
T.N.	83.33	56.00	68.80
U.P.^	47.37	43.18	62.50
W.B.	94.74	26.32	56.73
ALL INDIA	100.00	52.35	77.18
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.37

Table 3.40				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MOONG - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-46.43	-48.18	-52.00	-38.82
ASSAM	-11.76	54.00	-4.00	-24.29
BIHAR#	18.33	73.33	23.33	-15.38
GUJARAT	-30.34	-28.85	-24.14	-38.33
HARYANA	-24.44	-21.67	-25.88	-20.00
KARNATAKA	-22.00	15.71	-27.00	-30.83
KERALA	3.33	10.00	-6.36	2.22
M.P.*	-20.00	-15.00	-15.00	-12.22
MAHARASHTRA	0.00	-8.18	2.86	1.88
ORISSA	-25.26	1.54	-30.95	-30.00
PUNJAB	-12.86	-13.53	-10.50	-15.00
RAJASTHAN	-22.17	-8.82	-20.87	-23.93
T.N.	18.75	75.00	7.50	-3.85
U.P.^	-10.00	26.67	-21.43	-20.00
W.B.	-16.92	-25.00	-19.17	-10.00
ALL INDIA	-18.57	-13.33	-11.54	-17.22
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.37

Table 3.41								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.020	0.010	0.020	0.020	0.008	0.008	0.005	0.010
ASSAM	0.310	0.230	0.300	0.410	0.328	0.236	0.314	0.391
BIHAR#	0.340	0.260	0.400	0.410	0.262	0.224	0.292	0.300
GUJARAT	0.000	0.000	0.000	0.000	0.004	0.001	0.006	0.004
HARYANA	0.120	0.100	0.120	0.120	0.106	0.050	0.088	0.122
KARNATAKA	0.020	0.020	0.010	0.020	0.005	0.004	0.005	0.007
KERALA	0.010	0.010	0.010	0.010	0.003	0.002	0.001	0.003
M.P.*	0.120	0.100	0.110	0.160	0.078	0.081	0.072	0.083
MAHARASHTRA	0.040	0.030	0.040	0.050	0.033	0.023	0.032	0.043
ORISSA	0.090	0.070	0.100	0.110	0.036	0.025	0.054	0.047
PUNJAB	0.160	0.110	0.130	0.170	0.135	0.110	0.120	0.140
RAJASTHAN	0.040	0.030	0.030	0.040	0.033	0.028	0.029	0.042
T.N.	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000
U.P.^	0.140	0.100	0.140	0.190	0.107	0.081	0.110	0.136
W.B.	0.250	0.160	0.250	0.350	0.245	0.142	0.240	0.331
ALL INDIA	0.130	0.100	0.140	0.140	0.105	0.089	0.111	0.113
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.42			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	15.38	50.00	100.00
ASSAM	238.46	56.10	73.17
BIHAR#	261.54	63.41	97.56
GUJARAT	0.00	#DIV/0!	#DIV/0!
HARYANA	92.31	83.33	100.00
KARNATAKA	15.38	100.00	50.00
KERALA	7.69	100.00	100.00
M.P.*	92.31	62.50	68.75
MAHARASHTRA	30.77	60.00	80.00
ORISSA	69.23	63.64	90.91
PUNJAB	123.08	64.71	76.47
RAJASTHAN	30.77	75.00	75.00
T.N.	0.00	#DIV/0!	#DIV/0!
U.P.^	107.69	52.63	73.68
W.B.	192.31	45.71	71.43
ALL INDIA	100.00	71.43	100.00
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.41

Table 3.43			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	7.62	80.00	50.00
ASSAM	312.38	60.36	80.31
BIHAR#	249.52	74.67	97.33
GUJARAT	3.81	25.00	150.00
HARYANA	100.95	40.98	72.13
KARNATAKA	4.76	57.14	71.43
KERALA	2.86	66.67	33.33
M.P.*	74.29	97.59	86.75
MAHARASHTRA	31.43	53.49	74.42
ORISSA	34.29	53.19	114.89
PUNJAB	128.57	78.57	85.71
RAJASTHAN	31.43	66.67	69.05
T.N.	0.95	#DIV/0!	#DIV/0!
U.P.^	101.90	59.56	80.88
W.B.	233.33	42.90	72.51
ALL INDIA	100.00	78.76	98.23
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.41

Table 3.44				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-60.00	-20.00	-75.00	-50.00
ASSAM	5.81	2.61	4.67	-4.63
BIHAR#	-22.94	-13.85	-27.00	-26.83
GUJARAT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
HARYANA	-11.67	-50.00	-26.67	1.67
KARNATAKA	-75.00	-80.00	-50.00	-65.00
KERALA	-70.00	-80.00	-90.00	-70.00
M.P.*	-35.00	-19.00	-34.55	-48.13
MAHARASHTRA	-17.50	-23.33	-20.00	-14.00
ORISSA	-60.00	-64.29	-46.00	-57.27
PUNJAB	-15.63	0.00	-7.69	-17.65
RAJASTHAN	-17.50	-6.67	-3.33	5.00
T.N.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U.P.^	-23.57	-19.00	-21.43	-28.42
W.B.	-2.00	-11.25	-4.00	-5.43
ALL INDIA	-19.23	-11.00	-20.71	-19.29
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.41

Table 3.45								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.030	0.030	0.030	0.020	0.016	0.022	0.015	0.007
ASSAM	0.380	0.320	0.350	0.460	0.424	0.336	0.416	0.504
BIHAR#	0.340	0.350	0.340	0.320	0.307	0.332	0.303	0.274
GUJARAT	0.010	0.010	0.010	0.010	0.012	0.006	0.015	0.010
HARYANA	0.130	0.100	0.120	0.150	0.112	0.077	0.112	0.133
KARNATAKA	0.030	0.040	0.020	0.020	0.018	0.027	0.011	0.018
KERALA	0.000	0.010	0.000	0.000	0.002	0.001	0.002	0.004
M.P.*	0.090	0.090	0.090	0.080	0.060	0.071	0.061	0.038
MAHARASHTRA	0.060	0.070	0.060	0.070	0.060	0.059	0.062	0.058
ORISSA	0.100	0.110	0.090	0.090	0.048	0.062	0.036	0.034
PUNJAB	0.160	0.120	0.150	0.190	0.135	0.124	0.137	0.137
RAJASTHAN	0.060	0.040	0.070	0.080	0.050	0.033	0.053	0.072
T.N.	0.000	0.000	0.000	0.000	0.002	0.001	0.002	0.003
U.P.^	0.130	0.130	0.130	0.140	0.112	0.105	0.121	0.113
W.B.	0.320	0.260	0.340	0.340	0.305	0.247	0.327	0.329
ALL INDIA	0.110	0.100	0.100	0.120	0.092	0.093	0.092	0.092
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.46			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	27.27	150.00	150.00
ASSAM	345.45	69.57	76.09
BIHAR#	309.09	109.38	106.25
GUJARAT	9.09	100.00	100.00
HARYANA	118.18	66.67	80.00
KARNATAKA	27.27	200.00	100.00
KERALA	0.00	#DIV/0!	#DIV/0!
M.P.*	81.82	112.50	112.50
MAHARASHTRA	54.55	100.00	85.71
ORISSA	90.91	122.22	100.00
PUNJAB	145.45	63.16	78.95
RAJASTHAN	54.55	50.00	87.50
T.N.	0.00	#DIV/0!	#DIV/0!
U.P.^	118.18	92.86	92.86
W.B.	290.91	76.47	100.00
ALL INDIA	100.00	83.33	83.33
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.45

Table 3.47			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	17.39	314.29	214.29
ASSAM	460.87	66.67	82.54
BIHAR#	333.70	121.17	110.58
GUJARAT	13.04	60.00	150.00
HARYANA	121.74	57.89	84.21
KARNATAKA	19.57	150.00	61.11
KERALA	2.17	25.00	50.00
M.P.*	65.22	186.84	160.53
MAHARASHTRA	65.22	101.72	106.90
ORISSA	52.17	182.35	105.88
PUNJAB	146.74	90.51	100.00
RAJASTHAN	54.35	45.83	73.61
T.N.	2.17	33.33	66.67
U.P.^	121.74	92.92	107.08
W.B.	331.52	75.08	99.39
ALL INDIA	100.00	101.09	100.00
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.45

Table 3.48				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF MASUR - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-46.67	-26.67	-50.00	-65.00
ASSAM	11.58	5.00	18.86	9.57
BIHAR#	-9.71	-5.14	-10.88	-14.38
GUJARAT	20.00	-40.00	50.00	0.00
HARYANA	-13.85	-23.00	-6.67	-11.33
KARNATAKA	-40.00	-32.50	-45.00	-10.00
KERALA	#DIV/0!	-90.00	#DIV/0!	#DIV/0!
M.P.*	-33.33	-21.11	-32.22	-52.50
MAHARASHTRA	0.00	-15.71	3.33	-17.14
ORISSA	-52.00	-43.64	-60.00	-62.22
PUNJAB	-15.63	3.33	-8.67	-27.89
RAJASTHAN	-16.67	-17.50	-24.29	-10.00
T.N.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U.P.^	-13.85	-19.23	-6.92	-19.29
W.B.	-4.69	-5.00	-3.82	-3.24
ALL INDIA	-16.36	-7.00	-8.00	-23.33
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.45

Table 3.49								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.090	0.030	0.060	0.170	0.104	0.030	0.072	0.192
ASSAM	0.070	0.060	0.080	0.080	0.055	0.028	0.044	0.082
BIHAR#	0.020	0.020	0.020	0.020	0.016	0.013	0.017	0.022
GUJARAT	0.050	0.040	0.050	0.050	0.042	0.033	0.035	0.055
HARYANA	0.070	0.050	0.080	0.070	0.059	0.023	0.039	0.074
KARNATAKA	0.050	0.020	0.040	0.100	0.056	0.023	0.053	0.112
KERALA	0.100	0.020	0.050	0.140	0.130	0.034	0.061	0.164
M.P.*	0.160	0.150	0.180	0.140	0.090	0.084	0.102	0.082
MAHARASHTRA	0.050	0.050	0.050	0.040	0.045	0.049	0.041	0.048
ORISSA	0.030	0.020	0.040	0.070	0.053	0.027	0.074	0.113
PUNJAB	0.130	0.080	0.110	0.140	0.106	0.036	0.081	0.123
RAJASTHAN	0.120	0.110	0.100	0.130	0.061	0.043	0.057	0.075
T.N.	0.170	0.070	0.150	0.300	0.200	0.104	0.180	0.304
U.P.^	0.190	0.140	0.180	0.250	0.134	0.079	0.127	0.211
W.B.	0.050	0.030	0.050	0.060	0.015	0.012	0.012	0.023
ALL INDIA	0.100	0.070	0.090	0.140	0.080	0.048	0.071	0.124
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.50			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	90	17.65	35.29
ASSAM	70	75.00	100.00
BIHAR#	20	100.00	100.00
GUJARAT	50	80.00	100.00
HARYANA	70	71.43	114.29
KARNATAKA	50	20.00	40.00
KERALA	100	14.29	35.71
M.P.*	160	107.14	128.57
MAHARASHTRA	50	125.00	125.00
ORISSA	30	28.57	57.14
PUNJAB	130	57.14	78.57
RAJASTHAN	120	84.62	76.92
T.N.	170	23.33	50.00
U.P.^	190	56.00	72.00
W.B.	50	50.00	83.33
ALL INDIA	100	50.00	64.29
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.49

Table 3.51			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	130.00	15.63	37.50
ASSAM	68.75	34.15	53.66
BIHAR#	20.00	59.09	77.27
GUJARAT	52.50	60.00	63.64
HARYANA	73.75	31.08	52.70
KARNATAKA	70.00	20.54	47.32
KERALA	162.50	20.73	37.20
M.P.*	112.50	102.44	124.39
MAHARASHTRA	56.25	102.08	85.42
ORISSA	66.25	23.89	65.49
PUNJAB	132.50	29.27	65.85
RAJASTHAN	76.25	57.33	76.00
T.N.	250.00	34.21	59.21
U.P.^	167.50	37.44	60.19
W.B.	18.75	52.17	52.17
ALL INDIA	100.00	38.71	57.26
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.49

Table 3.52				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	15.56	0.00	20.00	12.94
ASSAM	-21.43	-53.33	-45.00	2.50
BIHAR#	-20.00	-35.00	-15.00	10.00
GUJARAT	-16.00	-17.50	-30.00	10.00
HARYANA	-15.71	-54.00	-51.25	5.71
KARNATAKA	12.00	15.00	32.50	12.00
KERALA	30.00	70.00	22.00	17.14
M.P.*	-43.75	-44.00	-43.33	-41.43
MAHARASHTRA	-10.00	-2.00	-18.00	20.00
ORISSA	76.67	35.00	85.00	61.43
PUNJAB	-18.46	-55.00	-26.36	-12.14
RAJASTHAN	-49.17	-60.91	-43.00	-42.31
T.N.	17.65	48.57	20.00	1.33
U.P.^	-29.47	-43.57	-29.44	-15.60
W.B.	-70.00	-60.00	-76.00	-61.67
ALL INDIA	-20.00	-31.43	-21.11	-11.43
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.49

Table 3.53								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.170	0.060	0.170	0.310	0.178	0.063	0.170	0.329
ASSAM	0.040	0.040	0.040	0.050	0.019	0.007	0.021	0.026
BIHAR#	0.010	0.010	0.010	0.020	0.006	0.002	0.004	0.016
GUJARAT	0.030	0.020	0.020	0.040	0.034	0.015	0.029	0.047
HARYANA	0.090	0.050	0.100	0.110	0.086	0.043	0.077	0.126
KARNATAKA	0.120	0.040	0.130	0.210	0.124	0.052	0.123	0.196
KERALA	0.130	0.040	0.110	0.220	0.152	0.056	0.113	0.243
M.P.*	0.070	0.060	0.060	0.080	0.043	0.038	0.045	0.053
MAHARASHTRA	0.040	0.040	0.030	0.050	0.033	0.024	0.024	0.050
ORISSA	0.040	0.020	0.040	0.080	0.052	0.036	0.051	0.089
PUNJAB	0.130	0.100	0.130	0.150	0.109	0.086	0.107	0.121
RAJASTHAN	0.080	0.060	0.070	0.130	0.043	0.027	0.044	0.066
T.N.	0.260	0.130	0.260	0.400	0.263	0.161	0.251	0.358
U.P.^	0.160	0.130	0.160	0.200	0.125	0.103	0.135	0.152
W.B.	0.020	0.010	0.020	0.020	0.012	0.007	0.038	0.019
ALL INDIA	0.110	0.070	0.100	0.150	0.090	0.057	0.087	0.128
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.54			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	154.55	19.35	54.84
ASSAM	36.36	80.00	80.00
BIHAR#	9.09	50.00	50.00
GUJARAT	27.27	50.00	50.00
HARYANA	81.82	45.45	90.91
KARNATAKA	109.09	19.05	61.90
KERALA	118.18	18.18	50.00
M.P.*	63.64	75.00	75.00
MAHARASHTRA	36.36	80.00	60.00
ORISSA	36.36	25.00	50.00
PUNJAB	118.18	66.67	86.67
RAJASTHAN	72.73	46.15	53.85
T.N.	236.36	32.50	65.00
U.P.^	145.45	65.00	80.00
W.B.	18.18	50.00	100.00
ALL INDIA	100.00	46.67	66.67
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.53

Table 3.55			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	197.78	19.15	51.67
ASSAM	21.11	26.92	80.77
BIHAR#	6.67	12.50	25.00
GUJARAT	37.78	31.91	61.70
HARYANA	95.56	34.13	61.11
KARNATAKA	137.78	26.53	62.76
KERALA	168.89	23.05	46.50
M.P.*	47.78	71.70	84.91
MAHARASHTRA	36.67	48.00	48.00
ORISSA	57.78	40.45	57.30
PUNJAB	121.11	71.07	88.43
RAJASTHAN	47.78	40.91	66.67
T.N.	292.22	44.97	70.11
U.P.^	138.89	67.76	88.82
W.B.	13.33	36.84	200.00
ALL INDIA	100.00	44.53	67.97
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.53

Table 3.56				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF URAD - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	4.71	5.00	0.00	6.13
ASSAM	-52.50	-82.50	-47.50	-48.00
BIHAR#	-40.00	-80.00	-60.00	-20.00
GUJARAT	13.33	-25.00	45.00	17.50
HARYANA	-4.44	-14.00	-23.00	14.55
KARNATAKA	3.33	30.00	-5.38	-6.67
KERALA	16.92	40.00	2.73	10.45
M.P.*	-38.57	-36.67	-25.00	-33.75
MAHARASHTRA	-17.50	-40.00	-20.00	0.00
ORISSA	30.00	80.00	27.50	11.25
PUNJAB	-16.15	-14.00	-17.69	-19.33
RAJASTHAN	-46.25	-55.00	-37.14	-49.23
T.N.	1.15	23.85	-3.46	-10.50
U.P.^	-21.88	-20.77	-15.63	-24.00
W.B.	-40.00	-30.00	90.00	-5.00
ALL INDIA	-18.18	-18.57	-13.00	-14.67
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.53

Table 3.57								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ASSAM	0.020	0.020	0.020	0.010	0.013	0.003	0.013	0.019
BIHAR#	0.080	0.090	0.080	0.040	0.034	0.049	0.023	0.009
GUJARAT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARYANA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
KARNATAKA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
KERALA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
M.P.*	0.090	0.080	0.110	0.090	0.065	0.057	0.066	0.089
MAHARASHTRA	0.040	0.050	0.040	0.010	0.016	0.033	0.011	0.005
ORISSA	0.020	0.030	0.010	0.020	0.001	0.001	0.001	0.001
PUNJAB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAJASTHAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
T.N.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
U.P.^	0.000	0.000	0.000	0.000	0.003	0.003	0.145	0.002
W.B.	0.030	0.030	0.030	0.020	0.031	0.043	0.028	0.028
ALL INDIA	0.020	0.030	0.020	0.010	0.014	0.023	0.012	0.009
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.58			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0.00	#DIV/0!	#DIV/0!
ASSAM	100.00	200.00	200.00
BIHAR#	400.00	225.00	200.00
GUJARAT	0.00	#DIV/0!	#DIV/0!
HARYANA	0.00	#DIV/0!	#DIV/0!
KARNATAKA	0.00	#DIV/0!	#DIV/0!
KERALA	0.00	#DIV/0!	#DIV/0!
M.P.*	450.00	88.89	122.22
MAHARASHTRA	200.00	500.00	400.00
ORISSA	100.00	150.00	50.00
PUNJAB	0.00	#DIV/0!	#DIV/0!
RAJASTHAN	0.00	#DIV/0!	#DIV/0!
T.N.	0.00	#DIV/0!	#DIV/0!
U.P.^	0.00	#DIV/0!	#DIV/0!
W.B.	150.00	150.00	150.00
ALL INDIA	100.00	300.00	200.00
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.57

Table 3.59			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0.00	#DIV/0!	#DIV/0!
ASSAM	92.86	15.79	68.42
BIHAR#	242.86	544.44	255.56
GUJARAT	0.00	#DIV/0!	#DIV/0!
HARYANA	0.00	#DIV/0!	#DIV/0!
KARNATAKA	0.00	#DIV/0!	#DIV/0!
KERALA	0.00	#DIV/0!	#DIV/0!
M.P.*	464.29	64.04	74.16
MAHARASHTRA	114.29	660.00	220.00
ORISSA	7.14	100.00	100.00
PUNJAB	0.00	#DIV/0!	#DIV/0!
RAJASTHAN	0.00	#DIV/0!	#DIV/0!
T.N.	0.00	#DIV/0!	#DIV/0!
U.P.^	21.43	150.00	7250.00
W.B.	221.43	153.57	100.00
ALL INDIA	100.00	255.56	133.33
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.57

Table 3.60				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ASSAM	-35.00	-85.00	-35.00	90.00
BIHAR#	-57.50	-45.56	-71.25	-77.50
GUJARAT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
HARYANA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KARNATAKA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KERALA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
M.P.*	-27.78	-28.75	-40.00	-1.11
MAHARASHTRA	-60.00	-34.00	-72.50	-50.00
ORISSA	-95.00	-96.67	-90.00	-95.00
PUNJAB	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
RAJASTHAN	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T.N.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U.P.^	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
W.B.	3.33	43.33	-6.67	40.00
ALL INDIA	-30.00	-23.33	-40.00	-10.00
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.57

Table 3.61								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ASSAM	0.000	0.000	0.000	0.000	0.003	0.008	0.000	0.002
BIHAR#	0.020	0.020	0.010	0.010	0.007	0.014	0.001	0.000
GUJARAT	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HARYANA	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000
KARNATAKA	0.000	0.000	0.000	0.000	0.002	0.000	0.005	0.001
KERALA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
M.P.*	0.010	0.020	0.010	0.000	0.013	0.027	0.003	0.000
MAHARASHTRA	0.010	0.020	0.010	0.000	0.001	0.003	0.000	0.000
ORISSA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PUNJAB	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
RAJASTHAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
T.N.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
U.P.^	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000
W.B.	0.010	0.010	0.000	0.000	0.004	0.009	0.002	0.002
ALL INDIA	0.000	0.010	0.000	0.000	0.002	0.005	0.001	0.000
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.62			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!
ASSAM	#DIV/0!	#DIV/0!	#DIV/0!
BIHAR#	#DIV/0!	200	100
GUJARAT	#DIV/0!	#DIV/0!	#DIV/0!
HARYANA	#DIV/0!	#DIV/0!	#DIV/0!
KARNATAKA	#DIV/0!	#DIV/0!	#DIV/0!
KERALA	#DIV/0!	#DIV/0!	#DIV/0!
M.P.*	#DIV/0!	#DIV/0!	#DIV/0!
MAHARASHTRA	#DIV/0!	#DIV/0!	#DIV/0!
ORISSA	#DIV/0!	#DIV/0!	#DIV/0!
PUNJAB	#DIV/0!	#DIV/0!	#DIV/0!
RAJASTHAN	#DIV/0!	#DIV/0!	#DIV/0!
T.N.	#DIV/0!	#DIV/0!	#DIV/0!
U.P.^	#DIV/0!	#DIV/0!	#DIV/0!
W.B.	#DIV/0!	#DIV/0!	#DIV/0!
ALL INDIA	#DIV/0!	#DIV/0!	#DIV/0!
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.61

Table 3.63			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0	#DIV/0!	#DIV/0!
ASSAM	150	400	0
BIHAR#	350	#DIV/0!	#DIV/0!
GUJARAT	0	#DIV/0!	#DIV/0!
HARYANA	0	#DIV/0!	#DIV/0!
KARNATAKA	100	0	500
KERALA	0	0	0
M.P.*	650	#DIV/0!	#DIV/0!
MAHARASHTRA	50	#DIV/0!	#DIV/0!
ORISSA	0	#DIV/0!	#DIV/0!
PUNJAB	0	#DIV/0!	#DIV/0!
RAJASTHAN	0	#DIV/0!	#DIV/0!
T.N.	0	#DIV/0!	#DIV/0!
U.P.^	50	#DIV/0!	#DIV/0!
W.B.	200	450	100
ALL INDIA	100	#DIV/0!	#DIV/0!
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.61

Table 3.64				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF KHESARI - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ASSAM	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
BIHAR#	-65	-30	-90	-100
GUJARAT	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
HARYANA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KARNATAKA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KERALA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
M.P.*	30	35	-70	#DIV/0!
MAHARASHTRA	-90	-85	-100	#DIV/0!
ORISSA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
PUNJAB	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
RAJASTHAN	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T.N.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U.P.^	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
W.B.	-60	-10	#DIV/0!	#DIV/0!
ALL INDIA	#DIV/0!	-50	#DIV/0!	#DIV/0!
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.61

Table 3.65								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
ASSAM	0.000	0.000	0.000	0.000	0.012	0.002	0.011	0.019
BIHAR#	0.010	0.010	0.010	0.010	0.011	0.011	0.014	0.004
GUJARAT	0.010	0.000	0.010	0.010	0.004	0.004	0.003	0.005
HARYANA	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000
KARNATAKA	0.000	0.000	0.000	0.000	0.005	0.002	0.004	0.011
KERALA	0.030	0.010	0.020	0.030	0.039	0.022	0.035	0.041
M.P.*	0.000	0.000	0.000	0.010	0.009	0.011	0.005	0.012
MAHARASHTRA	0.020	0.010	0.020	0.030	0.016	0.007	0.017	0.025
ORISSA	0.000	0.000	0.000	0.020	0.019	0.007	0.021	0.065
PUNJAB	0.000	0.000	0.000	0.000	0.001	0.004	0.001	0.001
RAJASTHAN	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000
T.N.	0.000	0.000	0.000	0.000	0.004	0.005	0.004	0.004
U.P.^	0.070	0.080	0.070	0.050	0.152	0.190	0.145	0.118
W.B.	0.010	0.000	0.010	0.020	0.019	0.019	0.019	0.019
ALL INDIA	0.020	0.020	0.020	0.020	0.037	0.046	0.036	0.031
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

- i) Report 402 – Level and Pattern of Consumer Expenditure
- ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

- i) Report 508 – Level and Pattern of Consumer Expenditure
- ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.66			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0	#DIV/0!	#DIV/0!
ASSAM	0	#DIV/0!	#DIV/0!
BIHAR#	50	100	100
GUJARAT	50	0	100
HARYANA	0	#DIV/0!	#DIV/0!
KARNATAKA	0	#DIV/0!	#DIV/0!
KERALA	150	33.333333	66.666667
M.P.*	0	0	0
MAHARASHTRA	100	33.333333	66.666667
ORISSA	0	0	0
PUNJAB	0	#DIV/0!	#DIV/0!
RAJASTHAN	0	#DIV/0!	#DIV/0!
T.N.	0	#DIV/0!	#DIV/0!
U.P.^	350	160	140
W.B.	50	0	50
ALL INDIA	100	100	100
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.65

Table 3.67			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	2.70	#DIV/0!	#DIV/0!
ASSAM	32.43	10.53	57.89
BIHAR#	29.73	275.00	350.00
GUJARAT	10.81	80.00	60.00
HARYANA	0.00	#DIV/0!	#DIV/0!
KARNATAKA	13.51	18.18	36.36
KERALA	105.41	53.66	85.37
M.P.*	24.32	91.67	41.67
MAHARASHTRA	43.24	28.00	68.00
ORISSA	51.35	10.77	32.31
PUNJAB	2.70	400.00	100.00
RAJASTHAN	2.70	#DIV/0!	#DIV/0!
T.N.	10.81	125.00	100.00
U.P.^	410.81	161.02	122.88
W.B.	51.35	100.00	100.00
ALL INDIA	100.00	148.39	116.13
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.65

Table 3.68				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ASSAM	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
BIHAR#	10.00	10.00	40.00	-60.00
GUJARAT	-60.00	#DIV/0!	-70.00	-50.00
HARYANA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KARNATAKA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KERALA	30.00	120.00	75.00	36.67
M.P.*	#DIV/0!	#DIV/0!	#DIV/0!	20.00
MAHARASHTRA	-20.00	-30.00	-15.00	-16.67
ORISSA	#DIV/0!	#DIV/0!	#DIV/0!	225.00
PUNJAB	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
RAJASTHAN	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T.N.	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
U.P.^	117.14	137.50	107.14	136.00
W.B.	90.00	#DIV/0!	90.00	-5.00
ALL INDIA	85.00	130.00	80.00	55.00
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.65

Table 3.69								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.000	0.000	0.000	0.000	0.002	0.000	0.001	0.006
ASSAM	0.000	0.000	0.000	0.010	0.013	0.012	0.010	0.017
BIHAR#	0.000	0.000	0.000	0.000	0.004	0.004	0.003	0.005
GUJARAT	0.010	0.000	0.010	0.020	0.008	0.004	0.008	0.010
HARYANA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
KARNATAKA	0.010	0.000	0.010	0.020	0.013	0.015	0.012	0.014
KERALA	0.010	0.010	0.010	0.020	0.038	0.014	0.032	0.058
M.P.*	0.000	0.000	0.000	0.010	0.003	0.004	0.002	0.002
MAHARASHTRA	0.030	0.010	0.020	0.040	0.018	0.009	0.019	0.024
ORISSA	0.030	0.010	0.030	0.050	0.042	0.023	0.049	0.081
PUNJAB	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.001
RAJASTHAN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
T.N.	0.000	0.000	0.000	0.010	0.004	0.002	0.004	0.007
U.P.^	0.010	0.020	0.010	0.010	0.040	0.065	0.026	0.013
W.B.	0.020	0.010	0.010	0.030	0.021	0.021	0.018	0.023
ALL INDIA	0.010	0.010	0.010	0.020	0.015	0.019	0.011	0.015
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.70			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS – URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	0	#DIV/0!	#DIV/0!
ASSAM	0	0	0
BIHAR#	0	#DIV/0!	#DIV/0!
GUJARAT	100	0	50
HARYANA	0	#DIV/0!	#DIV/0!
KARNATAKA	100	0	50
KERALA	100	50	50
M.P.*	0	0	0
MAHARASHTRA	300	25	50
ORISSA	300	20	60
PUNJAB	0	#DIV/0!	#DIV/0!
RAJASTHAN	0	#DIV/0!	#DIV/0!
T.N.	0	0	0
U.P.^	100	200	100
W.B.	200	33.33	33.33
ALL INDIA	100	50	50
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.69

Table 3.71			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	13.33	0.00	16.67
ASSAM	86.67	70.59	58.82
BIHAR#	26.67	80.00	60.00
GUJARAT	53.33	40.00	80.00
HARYANA	0.00	#DIV/0!	#DIV/0!
KARNATAKA	86.67	107.14	85.71
KERALA	253.33	24.14	55.17
M.P.*	20.00	200.00	100.00
MAHARASHTRA	120.00	37.50	79.17
ORISSA	280.00	28.40	60.49
PUNJAB	6.67	0.00	100.00
RAJASTHAN	0.00	#DIV/0!	#DIV/0!
T.N.	26.67	28.57	57.14
U.P.^	266.67	500.00	200.00
W.B.	140.00	91.30	78.26
ALL INDIA	100.00	126.67	73.33
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.69

Table 3.72				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF PEAS - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
ASSAM	#DIV/0!	#DIV/0!	#DIV/0!	70
BIHAR#	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
GUJARAT	-20	#DIV/0!	-20	-50
HARYANA	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
KARNATAKA	30	#DIV/0!	20	-30
KERALA	280	40	220	190
M.P.*	#DIV/0!	#DIV/0!	#DIV/0!	-80
MAHARASHTRA	-40	-10	-5	-40
ORISSA	40	130	63.33	62
PUNJAB	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
RAJASTHAN	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
T.N.	#DIV/0!	#DIV/0!	#DIV/0!	-30
U.P.^	300	225	160	30
W.B.	5	110	80	-23.33
ALL INDIA	50	90	10	-25
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.69

Table 3.73								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.020	0.020	0.020	0.030	0.008	0.010	0.003	0.014
ASSAM	0.010	0.010	0.010	0.010	0.025	0.018	0.026	0.025
BIHAR#	0.070	0.070	0.060	0.080	0.043	0.038	0.055	0.018
GUJARAT	0.100	0.030	0.070	0.140	0.058	0.033	0.045	0.085
HARYANA	0.130	0.040	0.070	0.190	0.014	0.002	0.005	0.020
KARNATAKA	0.230	0.170	0.250	0.250	0.139	0.100	0.150	0.172
KERALA	0.090	0.030	0.080	0.110	0.042	0.014	0.031	0.049
M.P.*	0.100	0.080	0.090	0.170	0.025	0.032	0.020	0.012
MAHARASHTRA	0.180	0.130	0.160	0.270	0.037	0.018	0.038	0.055
ORISSA	0.070	0.070	0.060	0.060	0.048	0.062	0.036	0.011
PUNJAB	0.180	0.080	0.130	0.200	0.077	0.019	0.058	0.091
RAJASTHAN	0.120	0.080	0.110	0.150	0.081	0.040	0.066	0.116
T.N.	0.090	0.060	0.090	0.110	0.040	0.031	0.042	0.044
U.P.^	0.060	0.020	0.060	0.110	0.016	0.012	0.016	0.020
W.B.	0.020	0.010	0.020	0.020	0.003	0.003	0.003	0.003
ALL INDIA	0.090	0.070	0.080	0.130	0.035	0.029	0.035	0.043
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.74			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	22.22	66.67	66.67
ASSAM	11.11	100.00	100.00
BIHAR#	77.78	87.50	75.00
GUJARAT	111.11	21.43	50.00
HARYANA	144.44	21.05	36.84
KARNATAKA	255.56	68.00	100.00
KERALA	100.00	27.27	72.73
M.P.*	111.11	47.06	52.94
MAHARASHTRA	200.00	48.15	59.26
ORISSA	77.78	116.67	100.00
PUNJAB	200.00	40.00	65.00
RAJASTHAN	133.33	53.33	73.33
T.N.	100.00	54.55	81.82
U.P.^	66.67	18.18	54.55
W.B.	22.22	50.00	100.00
ALL INDIA	100.00	53.85	61.54
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.73

Table 3.75			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	22.86	71.43	21.43
ASSAM	71.43	72.00	104.00
BIHAR#	122.86	211.11	305.56
GUJARAT	165.71	38.82	52.94
HARYANA	40.00	10.00	25.00
KARNATAKA	397.14	58.14	87.21
KERALA	120.00	28.57	63.27
M.P.*	71.43	266.67	166.67
MAHARASHTRA	105.71	32.73	69.09
ORISSA	137.14	563.64	327.27
PUNJAB	220.00	20.88	63.74
RAJASTHAN	231.43	34.48	56.90
T.N.	114.29	70.45	95.45
U.P.^	45.71	60.00	80.00
W.B.	8.57	100.00	100.00
ALL INDIA	100.00	67.44	81.40
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.73

Table 3.76				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-60.00	-50.00	-85.00	-53.33
ASSAM	150.00	80.00	160.00	150.00
BIHAR#	-38.57	-45.71	-8.33	-77.50
GUJARAT	-42.00	10.00	-35.71	-39.29
HARYANA	-89.23	-95.00	-92.86	-89.47
KARNATAKA	-39.57	-41.18	-40.00	-31.20
KERALA	-53.33	-53.33	-61.25	-55.45
M.P.*	-75.00	-60.00	-77.78	-92.94
MAHARASHTRA	-79.44	-86.15	-76.25	-79.63
ORISSA	-31.43	-11.43	-40.00	-81.67
PUNJAB	-57.22	-76.25	-55.38	-54.50
RAJASTHAN	-32.50	-50.00	-40.00	-22.67
T.N.	-55.56	-48.33	-53.33	-60.00
U.P.^	-73.33	-40.00	-73.33	-81.82
W.B.	-85.00	-70.00	-85.00	-85.00
ALL INDIA	-61.11	-58.57	-56.25	-66.92
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.73

Table 3.77								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.010	0.010	0.010	0.030	0.002	0	0.001	0.004
ASSAM	0.010	0.000	0.010	0.020	0.013	0.011	0.009	0.021
BIHAR#	0.040	0.020	0.050	0.090	0.009	0.014	0.006	0.003
GUJARAT	0.130	0.070	0.120	0.180	0.05	0.028	0.049	0.06
HARYANA	0.120	0.090	0.100	0.170	0.049	0.007	0.029	0.1
KARNATAKA	0.140	0.140	0.150	0.130	0.103	0.074	0.11	0.124
KERALA	0.080	0.040	0.080	0.120	0.028	0.016	0.022	0.04
M.P.*	0.110	0.060	0.120	0.180	0.005	0.007	0.003	0.005
MAHARASHTRA	0.120	0.100	0.100	0.140	0.047	0.02	0.047	0.066
ORISSA	0.030	0.010	0.030	0.060	0.013	0.016	0.015	0.003
PUNJAB	0.200	0.110	0.180	0.250	0.101	0.052	0.096	0.129
RAJASTHAN	0.140	0.100	0.140	0.200	0.024	0.021	0.025	0.027
T.N.	0.060	0.040	0.070	0.070	0.037	0.028	0.039	0.043
U.P.^	0.090	0.040	0.090	0.180	0.011	0.003	0.012	0.026
W.B.	0.010	0.000	0.010	0.020	0.002	0	0.002	0.003
ALL INDIA	0.090	0.050	0.090	0.140	0.036	0.018	0.036	0.055
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.78			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	11.11	33.33	33.33
ASSAM	11.11	0.00	50.00
BIHAR#	44.44	22.22	55.56
GUJARAT	144.44	38.89	66.67
HARYANA	133.33	52.94	58.82
KARNATAKA	155.56	107.69	115.38
KERALA	88.89	33.33	66.67
M.P.*	122.22	33.33	66.67
MAHARASHTRA	133.33	71.43	71.43
ORISSA	33.33	16.67	50.00
PUNJAB	222.22	44.00	72.00
RAJASTHAN	155.56	50.00	70.00
T.N.	66.67	57.14	100.00
U.P.^	100.00	22.22	50.00
W.B.	11.11	0.00	50.00
ALL INDIA	100.00	35.71	64.29
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.77

Table 3.79			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	5.56	0.00	25.00
ASSAM	36.11	52.38	42.86
BIHAR#	25.00	466.67	200.00
GUJARAT	138.89	46.67	81.67
HARYANA	136.11	7.00	29.00
KARNATAKA	286.11	59.68	88.71
KERALA	77.78	40.00	55.00
M.P.*	13.89	140.00	60.00
MAHARASHTRA	130.56	30.30	71.21
ORISSA	36.11	533.33	500.00
PUNJAB	280.56	40.31	74.42
RAJASTHAN	66.67	77.78	92.59
T.N.	102.78	65.12	90.70
U.P.^	30.56	11.54	46.15
W.B.	5.56	0.00	66.67
ALL INDIA	100.00	32.73	65.45
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.77

Table 3.80				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF OTHER PULSES - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-80.00	-100.00	-90.00	-86.67
ASSAM	30.00	#DIV/0!	-10.00	5.00
BIHAR#	-77.50	-30.00	-88.00	-96.67
GUJARAT	-61.54	-60.00	-59.17	-66.67
HARYANA	-59.17	-92.22	-71.00	-41.18
KARNATAKA	-26.43	-47.14	-26.67	-4.62
KERALA	-65.00	-60.00	-72.50	-66.67
M.P.*	-95.45	-88.33	-97.50	-97.22
MAHARASHTRA	-60.83	-80.00	-53.00	-52.86
ORISSA	-56.67	60.00	-50.00	-95.00
PUNJAB	-49.50	-52.73	-46.67	-48.40
RAJASTHAN	-82.86	-79.00	-82.14	-86.50
T.N.	-38.33	-30.00	-44.29	-38.57
U.P.^	-87.78	-92.50	-86.67	-85.56
W.B.	-80.00	#DIV/0!	-80.00	-85.00
ALL INDIA	-60.00	-64.00	-60.00	-60.71
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.77

Table 3.81								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	11.570	8.990	11.690	13.810	11.060	9.017	11.319	12.167
ASSAM	12.530	10.320	12.630	14.150	12.433	11.116	12.433	13.065
BIHAR#	7.950	6.900	8.570	9.700	7.759	7.227	8.034	8.802
GUJARAT	2.010	1.460	1.810	2.480	2.028	1.464	1.831	2.543
HARYANA	0.730	0.690	0.730	0.740	0.678	0.403	0.509	0.793
KARNATAKA	5.440	2.900	5.570	8.090	5.307	4.286	5.270	6.943
KERALA	9.290	6.850	8.770	10.030	8.608	6.515	7.904	9.067
M.P.*	6.030	5.590	6.880	5.370	5.225	5.471	4.992	4.975
MAHARASHTRA	2.970	1.660	3.130	4.470	2.967	2.688	2.902	3.314
ORISSA	15.240	13.300	16.770	17.550	13.294	12.469	14.519	14.165
PUNJAB	0.740	0.390	0.680	0.790	0.755	0.371	0.613	0.849
RAJASTHAN	0.220	0.210	0.170	0.280	0.176	0.103	0.151	0.243
T.N.	10.320	8.300	10.570	11.980	10.165	8.589	10.530	10.962
U.P.^	4.000	3.510	4.110	4.390	4.128	3.992	4.129	4.292
W.B.	13.730	11.340	13.890	15.630	12.205	10.534	12.213	13.488
ALL INDIA	7.020	6.080	7.540	7.300	6.549	6.269	6.578	6.793
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.82			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	164.81	65.10	84.65
ASSAM	178.49	72.93	89.26
BIHAR#	113.25	71.13	88.35
GUJARAT	28.63	58.87	72.98
HARYANA	10.40	93.24	98.65
KARNATAKA	77.49	35.85	68.85
KERALA	132.34	68.30	87.44
M.P.*	85.90	104.10	128.12
MAHARASHTRA	42.31	37.14	70.02
ORISSA	217.09	75.78	95.56
PUNJAB	10.54	49.37	86.08
RAJASTHAN	3.13	75.00	60.71
T.N.	147.01	69.28	88.23
U.P.^	56.98	79.95	93.62
W.B.	195.58	72.55	88.87
ALL INDIA	100.00	83.29	103.29
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.81

Table 3.83			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	168.88	74.11	93.03
ASSAM	189.85	85.08	95.16
BIHAR#	118.48	82.11	91.27
GUJARAT	30.97	57.57	72.00
HARYANA	10.35	50.82	64.19
KARNATAKA	81.04	61.73	75.90
KERALA	131.44	71.85	87.17
M.P.*	79.78	109.97	100.34
MAHARASHTRA	45.30	81.11	87.57
ORISSA	202.99	88.03	102.50
PUNJAB	11.53	43.70	72.20
RAJASTHAN	2.69	42.39	62.14
T.N.	155.21	78.35	96.06
U.P.^	63.03	93.01	96.20
W.B.	186.36	78.10	90.55
ALL INDIA	100.00	92.29	96.83
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.81

Table 3.84				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-4.41	0.30	-3.17	-11.90
ASSAM	-0.77	7.71	-1.56	-7.67
BIHAR#	-2.40	4.74	-6.25	-9.26
GUJARAT	0.90	0.27	1.16	2.54
HARYANA	-7.12	-41.59	-30.27	7.16
KARNATAKA	-2.44	47.79	-5.39	-14.18
KERALA	-7.34	-4.89	-9.87	-9.60
M.P.*	-13.35	-2.13	-27.44	-7.36
MAHARASHTRA	-0.10	61.93	-7.28	-25.86
ORISSA	-12.77	-6.25	-13.42	-19.29
PUNJAB	2.03	-4.87	-9.85	7.47
RAJASTHAN	-20.00	-50.95	-11.18	-13.21
T.N.	-1.50	3.48	-0.38	-8.50
U.P.^	3.20	13.73	0.46	-2.23
W.B.	-11.11	-7.11	-12.07	-13.70
ALL INDIA	-6.71	3.11	-12.76	-6.95
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.81

Table 3.85								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	10.130	9.520	10.570	10.260	9.546	9.438	9.842	9.230
ASSAM	10.760	10.330	11.350	10.150	10.586	10.753	10.929	9.933
BIHAR#	6.810	6.610	7.110	6.680	6.201	6.562	6.079	5.521
GUJARAT	2.070	1.830	2.040	2.300	2.102	1.664	2.163	2.216
HARYANA	1.520	1.170	1.690	1.480	1.158	0.803	1.253	1.261
KARNATAKA	6.380	4.960	6.790	7.420	5.661	4.785	5.936	6.181
KERALA	8.450	7.170	8.800	8.740	7.735	6.858	8.095	7.877
M.P.*	3.620	3.410	3.800	3.580	3.443	3.501	3.546	3.157
MAHARASHTRA	3.160	2.230	3.350	3.490	3.000	2.570	3.299	2.970
ORISSA	11.260	11.880	12.020	9.320	11.049	11.600	10.792	10.070
PUNJAB	0.920	0.630	0.810	1.130	1.027	1.034	1.100	0.943
RAJASTHAN	0.580	0.240	0.570	0.900	0.528	0.261	0.484	1.026
T.N.	9.130	8.210	9.710	9.190	8.632	8.891	8.956	8.030
U.P.^	2.610	2.430	2.700	2.750	2.831	2.742	2.914	2.877
W.B.	8.690	9.130	9.220	7.710	7.936	8.721	8.183	7.023
ALL INDIA	5.280	5.120	5.550	5.040	4.853	4.887	4.967	4.669
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.86			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE – URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	191.86	92.79	103.02
ASSAM	203.79	101.77	111.82
BIHAR#	128.98	98.95	106.44
GUJARAT	39.20	79.57	88.70
HARYANA	28.79	79.05	114.19
KARNATAKA	120.83	66.85	91.51
KERALA	160.04	82.04	100.69
M.P.*	68.56	95.25	106.15
MAHARASHTRA	59.85	63.90	95.99
ORISSA	213.26	127.47	128.97
PUNJAB	17.42	55.75	71.68
RAJASTHAN	10.98	26.67	63.33
T.N.	172.92	89.34	105.66
U.P.^	49.43	88.36	98.18
W.B.	164.58	118.42	119.58
ALL INDIA	100.00	101.59	110.12
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.85

Table 3.87			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	196.70	102.25	106.63
ASSAM	218.13	108.26	110.03
BIHAR#	127.78	118.86	110.11
GUJARAT	43.31	75.09	97.61
HARYANA	23.86	63.68	99.37
KARNATAKA	116.65	77.41	96.04
KERALA	159.39	87.06	102.77
M.P.*	70.95	110.90	112.32
MAHARASHTRA	61.82	86.53	111.08
ORISSA	227.67	115.19	107.17
PUNJAB	21.16	109.65	116.65
RAJASTHAN	10.88	25.44	47.17
T.N.	177.87	110.72	111.53
U.P.^	58.34	95.31	101.29
W.B.	163.53	124.18	116.52
ALL INDIA	100.00	104.67	106.38
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.85

Table 3.88				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF RICE - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-5.77	-0.86	-6.89	-10.04
ASSAM	-1.62	4.09	-3.71	-2.14
BIHAR#	-8.94	-0.73	-14.50	-17.35
GUJARAT	1.55	-9.07	6.03	-3.65
HARYANA	-23.82	-31.37	-25.86	-14.80
KARNATAKA	-11.27	-3.53	-12.58	-16.70
KERALA	-8.46	-4.35	-8.01	-9.87
M.P.*	-4.89	2.67	-6.68	-11.82
MAHARASHTRA	-5.06	15.25	-1.52	-14.90
ORISSA	-1.87	-2.36	-10.22	8.05
PUNJAB	11.63	64.13	35.80	-16.55
RAJASTHAN	-8.97	8.75	-15.09	14.00
T.N.	-5.45	8.29	-7.77	-12.62
U.P.^	8.47	12.84	7.93	4.62
W.B.	-8.68	-4.48	-11.25	-8.91
ALL INDIA	-8.09	-4.55	-10.50	-7.36
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.85

Table 3.89								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.190	0.050	0.140	0.400	0.284	0.077	0.218	0.504
ASSAM	0.640	0.640	0.600	0.730	0.605	0.413	0.538	0.785
BIHAR#	5.580	4.620	6.180	7.030	4.838	4.221	5.264	5.694
GUJARAT	3.980	2.130	3.580	5.220	3.655	2.107	3.633	4.527
HARYANA	11.880	9.140	10.740	13.250	9.515	8.049	9.065	9.907
KARNATAKA	0.850	0.620	0.740	1.290	1.021	0.777	1.035	1.358
KERALA	0.820	0.360	0.580	1.040	0.916	0.345	0.577	1.093
M.P.*	5.810	3.640	5.970	9.220	5.618	4.562	6.090	7.811
MAHARASHTRA	2.210	1.200	2.170	3.560	3.414	2.288	3.526	4.355
ORISSA	0.380	0.150	0.420	0.960	0.528	0.162	0.654	1.761
PUNJAB	9.870	8.550	8.930	10.340	8.989	7.661	8.631	9.251
RAJASTHAN	9.440	6.670	8.790	11.070	8.494	6.066	7.968	10.312
T.N.	0.340	0.100	0.290	0.610	0.340	0.138	0.248	0.617
U.P.^	9.160	8.090	9.090	10.470	8.446	7.336	8.417	9.820
W.B.	1.180	1.000	1.110	1.460	0.977	0.655	0.875	1.370
ALL INDIA	4.400	3.380	4.160	5.730	4.293	3.513	4.349	5.058
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.90			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	4.32	12.50	35.00
ASSAM	14.55	87.67	82.19
BIHAR#	126.82	65.72	87.91
GUJARAT	90.45	40.80	68.58
HARYANA	270.00	68.98	81.06
KARNATAKA	19.32	48.06	57.36
KERALA	18.64	34.62	55.77
M.P.*	132.05	39.48	64.75
MAHARASHTRA	50.23	33.71	60.96
ORISSA	8.64	15.63	43.75
PUNJAB	224.32	82.69	86.36
RAJASTHAN	214.55	60.25	79.40
T.N.	7.73	16.39	47.54
U.P.^	208.18	77.27	86.82
W.B.	26.82	68.49	76.03
ALL INDIA	100.00	58.99	72.60
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.89

Table 3.91			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	6.62	15.28	43.25
ASSAM	14.09	52.61	68.54
BIHAR#	112.70	74.13	92.45
GUJARAT	85.14	46.54	80.25
HARYANA	221.64	81.25	91.50
KARNATAKA	23.78	57.22	76.22
KERALA	21.34	31.56	52.79
M.P.*	130.86	58.40	77.97
MAHARASHTRA	79.52	52.54	80.96
ORISSA	12.30	9.20	37.14
PUNJAB	209.39	82.81	93.30
RAJASTHAN	197.86	58.82	77.27
T.N.	7.92	22.37	40.19
U.P.^	196.74	74.70	85.71
W.B.	22.76	47.81	63.87
ALL INDIA	100.00	69.45	85.98
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.89

Table 3.92				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	49.47	54.00	55.71	26.00
ASSAM	-5.47	-35.47	-10.33	7.53
BIHAR#	-13.30	-8.64	-14.82	-19.00
GUJARAT	-8.17	-1.08	1.48	-13.28
HARYANA	-19.91	-11.94	-15.60	-25.23
KARNATAKA	20.12	25.32	39.86	5.27
KERALA	11.71	-4.17	-0.52	5.10
M.P.*	-3.30	25.33	2.01	-15.28
MAHARASHTRA	54.48	90.67	62.49	22.33
ORISSA	38.95	8.00	55.71	83.44
PUNJAB	-8.93	-10.40	-3.35	-10.53
RAJASTHAN	-10.02	-9.06	-9.35	-6.85
T.N.	0.00	38.00	-14.48	1.15
U.P.^	-7.79	-9.32	-7.40	-6.21
W.B.	-17.20	-34.50	-21.17	-6.16
ALL INDIA	-2.43	3.93	4.54	-11.73
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.89

Table 3.93								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	0.760	0.300	0.730	1.450	0.754	0.340	0.706	1.332
ASSAM	1.290	0.950	1.160	1.720	1.335	0.802	1.119	2.067
BIHAR#	5.930	5.470	6.230	6.460	5.956	5.560	6.225	6.447
GUJARAT	5.610	4.560	5.770	6.080	5.371	4.598	5.433	5.635
HARYANA	8.900	8.360	8.940	9.110	7.923	7.882	8.015	7.834
KARNATAKA	1.560	0.940	1.620	2.170	1.716	1.190	1.650	2.315
KERALA	1.000	0.610	0.830	1.510	1.092	0.583	0.965	1.504
M.P.*	7.310	6.480	7.780	7.660	7.024	6.593	7.585	6.974
MAHARASHTRA	4.430	3.190	4.510	5.030	4.300	4.020	4.302	4.499
ORISSA	2.040	0.990	2.080	3.310	2.032	1.170	2.365	3.660
PUNJAB	7.990	7.380	7.880	8.300	7.910	7.266	8.056	8.048
RAJASTHAN	10.360	9.970	10.780	10.020	9.600	9.054	10.355	9.080
T.N.	0.840	0.430	0.810	1.390	0.784	0.338	0.694	1.246
U.P.^	8.390	8.360	8.290	8.630	8.062	7.836	8.197	8.309
W.B.	2.950	2.230	2.990	3.480	2.449	1.771	2.526	2.927
ALL INDIA	4.720	4.120	4.800	5.190	4.646	4.465	4.737	4.707
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.94			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	16.10	20.69	50.34
ASSAM	27.33	55.23	67.44
BIHAR#	125.64	84.67	96.44
GUJARAT	118.86	75.00	94.90
HARYANA	188.56	91.77	98.13
KARNATAKA	33.05	43.32	74.65
KERALA	21.19	40.40	54.97
M.P.*	154.87	84.60	101.57
MAHARASHTRA	93.86	63.42	89.66
ORISSA	43.22	29.91	62.84
PUNJAB	169.28	88.92	94.94
RAJASTHAN	219.49	99.50	107.58
T.N.	17.80	30.94	58.27
U.P.^	177.75	96.87	96.06
W.B.	62.50	64.08	85.92
ALL INDIA	100.00	79.38	92.49
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.93

Table 3.95			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	16.23	25.53	53.00
ASSAM	28.73	38.80	54.14
BIHAR#	128.20	86.24	96.56
GUJARAT	115.60	81.60	96.42
HARYANA	170.53	100.61	102.31
KARNATAKA	36.93	51.40	71.27
KERALA	23.50	38.76	64.16
M.P. *	151.18	94.54	108.76
MAHARASHTRA	92.55	89.35	95.62
ORISSA	43.74	31.97	64.62
PUNJAB	170.25	90.28	100.10
RAJASTHAN	206.63	99.71	114.04
T.N.	16.87	27.13	55.70
U.P.^	173.53	94.31	98.65
W.B.	52.71	60.51	86.30
ALL INDIA	100.00	94.86	100.64
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.93

Table 3.96				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF WHEAT - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-0.79	13.33	-3.29	-8.14
ASSAM	3.49	-15.58	-3.53	20.17
BIHAR#	0.44	1.65	-0.08	-0.20
GUJARAT	-4.26	0.83	-5.84	-7.32
HARYANA	-10.98	-5.72	-10.35	-14.01
KARNATAKA	10.00	26.60	1.85	6.68
KERALA	9.20	-4.43	16.27	-0.40
M.P.*	-3.91	1.74	-2.51	-8.96
MAHARASHTRA	-2.93	26.02	-4.61	-10.56
ORISSA	-0.39	18.18	13.70	10.57
PUNJAB	-1.00	-1.54	2.23	-3.04
RAJASTHAN	-7.34	-9.19	-3.94	-9.38
T.N.	-6.67	-21.40	-14.32	-10.36
U.P.^	-3.91	-6.27	-1.12	-3.72
W.B.	-16.98	-20.58	-15.52	-15.89
ALL INDIA	-1.57	8.37	-1.31	-9.31
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.93

Table 9.97								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	13.270	11.210	13.240	15.270	12.066	10.325	12.131	13.190
ASSAM	13.170	10.960	13.230	14.880	13.040	11.528	12.974	13.852
BIHAR#	14.310	12.540	15.360	17.210	13.079	11.916	13.829	14.857
GUJARAT	10.660	8.990	10.250	11.830	10.067	9.334	10.310	10.217
HARYANA	12.920	9.930	11.670	14.410	10.656	9.242	10.063	11.112
KARNATAKA	13.150	10.800	13.410	15.420	10.734	9.539	10.921	12.144
KERALA	10.110	7.210	9.350	11.070	9.533	6.869	8.489	10.170
M.P. *	14.200	12.280	14.710	16.650	12.163	11.438	12.522	13.591
MAHARASHTRA	11.390	10.040	11.480	13.020	10.503	9.852	10.630	10.971
ORISSA	15.930	13.930	17.390	18.600	13.979	12.872	15.225	15.955
PUNJAB	10.780	8.930	9.700	11.350	9.918	8.046	9.338	10.322
RAJASTHAN	14.850	12.420	14.400	16.170	12.685	11.261	12.322	13.825
T.N.	11.720	9.820	11.930	13.290	10.894	9.269	11.142	11.882
U.P. ^	13.910	12.370	13.910	15.640	12.865	11.545	12.871	14.440
W.B.	14.960	12.440	15.030	17.140	13.185	11.189	13.088	14.866
ALL INDIA	13.400	11.750	13.590	14.780	12.118	11.152	12.283	12.873
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 9.98			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	99.03	73.41	86.71
ASSAM	98.28	73.66	88.91
BIHAR#	106.79	72.86	89.25
GUJARAT	79.55	75.99	86.64
HARYANA	96.42	68.91	80.99
KARNATAKA	98.13	70.04	86.96
KERALA	75.45	65.13	84.46
M.P.*	105.97	73.75	88.35
MAHARASHTRA	85.00	77.11	88.17
ORISSA	118.88	74.89	93.49
PUNJAB	80.45	78.68	85.46
RAJASTHAN	110.82	76.81	89.05
T.N.	87.46	73.89	89.77
U.P.^	103.81	79.09	88.94
W.B.	111.64	72.58	87.69
ALL INDIA	100.00	79.50	91.95
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.97

Table 9.99			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	99.57	78.28	91.97
ASSAM	107.61	83.22	93.66
BIHAR#	107.93	80.20	93.08
GUJARAT	83.07	91.36	100.91
HARYANA	87.94	83.17	90.56
KARNATAKA	88.58	78.55	89.93
KERALA	78.67	67.54	83.47
M.P.*	100.37	84.16	92.13
MAHARASHTRA	86.67	89.80	96.89
ORISSA	115.36	80.68	95.42
PUNJAB	81.85	77.95	90.47
RAJASTHAN	104.68	81.45	89.13
T.N.	89.90	78.01	93.77
U.P.^	106.16	79.95	89.13
W.B.	108.81	75.27	88.04
ALL INDIA	100.00	86.63	95.42
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.97

Table 9.100				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-9.07	-7.89	-8.38	-13.62
ASSAM	-0.99	5.18	-1.93	-6.91
BIHAR#	-8.60	-4.98	-9.97	-13.67
GUJARAT	-5.56	3.83	0.59	-13.63
HARYANA	-17.52	-6.93	-13.77	-22.89
KARNATAKA	-18.37	-11.68	-18.56	-21.25
KERALA	-5.71	-4.73	-9.21	-8.13
M.P.*	-14.35	-6.86	-14.87	-18.37
MAHARASHTRA	-7.79	-1.87	-7.40	-15.74
ORISSA	-12.25	-7.60	-12.45	-14.22
PUNJAB	-8.00	-9.90	-3.73	-9.06
RAJASTHAN	-14.58	-9.33	-14.43	-14.50
T.N.	-7.05	-5.61	-6.61	-10.59
U.P.^	-7.51	-6.67	-7.47	-7.67
W.B.	-11.86	-10.06	-12.92	-13.27
ALL INDIA	-9.57	-5.09	-9.62	-12.90
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.97

Table 3.101								
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	11.300	10.440	11.640	11.960	10.509	10.026	10.751	10.732
ASSAM	12.050	11.280	12.510	11.870	11.923	11.556	12.050	12.000
BIHAR#	12.820	12.210	13.370	13.210	12.205	12.201	12.332	11.977
GUJARAT	8.960	8.200	9.230	9.030	8.289	7.821	8.468	8.263
HARYANA	10.460	9.540	10.640	10.690	9.147	8.715	9.343	9.175
KARNATAKA	10.870	9.870	11.370	11.310	9.708	9.236	10.004	9.800
KERALA	9.460	7.780	9.640	10.250	8.834	7.452	9.064	9.389
M.P.*	11.320	10.800	11.750	11.270	10.634	10.325	11.254	10.238
MAHARASHTRA	9.370	9.470	9.520	9.180	8.394	8.699	8.574	7.989
ORISSA	13.360	13.030	14.130	12.630	13.110	12.826	13.161	13.735
PUNJAB	9.010	8.020	8.790	9.580	9.013	8.325	9.222	9.103
RAJASTHAN	11.520	11.020	11.920	11.340	10.841	10.201	11.481	10.678
T.N.	10.050	8.760	10.610	10.640	9.477	9.314	9.699	9.332
U.P.^	11.080	10.890	11.050	11.430	10.944	10.642	11.150	11.226
W.B.	11.640	11.370	12.210	11.190	10.387	10.487	10.710	9.955
ALL INDIA	10.630	10.270	10.930	10.540	9.942	9.992	10.135	9.638
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 3.102			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	106.30	87.29	97.32
ASSAM	113.36	95.03	105.39
BIHAR#	120.60	92.43	101.21
GUJARAT	84.29	90.81	102.21
HARYANA	98.40	89.24	99.53
KARNATAKA	102.26	87.27	100.53
KERALA	88.99	75.90	94.05
M.P.*	106.49	95.83	104.26
MAHARASHTRA	88.15	103.16	103.70
ORISSA	125.68	103.17	111.88
PUNJAB	84.76	83.72	91.75
RAJASTHAN	108.37	97.18	105.11
T.N.	94.54	82.33	99.72
U.P.^	104.23	95.28	96.68
W.B.	109.50	101.61	109.12
ALL INDIA	100.00	97.44	103.70
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.101

Table 3.103			
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	105.70	93.42	100.18
ASSAM	119.93	96.30	100.42
BIHAR#	122.76	101.87	102.96
GUJARAT	83.37	94.65	102.48
HARYANA	92.00	94.99	101.83
KARNATAKA	97.65	94.24	102.08
KERALA	88.86	79.37	96.54
M.P.*	106.96	100.85	109.92
MAHARASHTRA	84.43	108.89	107.32
ORISSA	131.86	93.38	95.82
PUNJAB	90.66	91.45	101.31
RAJASTHAN	109.04	95.53	107.52
T.N.	95.32	99.81	103.93
U.P.^	110.08	94.80	99.32
W.B.	104.48	105.34	107.58
ALL INDIA	100.00	103.67	105.16
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 3.101

Table 3.104				
AVERAGE MONTHLY PER CAPITA CONSUMPTION(K.G.) OF TOTAL CEREALS - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-7.00	-3.97	-7.64	-10.27
ASSAM	-1.05	2.45	-3.68	1.10
BIHAR#	-4.80	-0.07	-7.76	-9.33
GUJARAT	-7.49	-4.62	-8.26	-8.49
HARYANA	-12.55	-8.65	-12.19	-14.17
KARNATAKA	-10.69	-6.42	-12.01	-13.35
KERALA	-6.62	-4.22	-5.98	-8.40
M.P.*	-6.06	-4.40	-4.22	-9.16
MAHARASHTRA	-10.42	-8.14	-9.94	-12.97
ORISSA	-1.87	-1.57	-6.86	8.75
PUNJAB	0.03	3.80	4.91	-4.98
RAJASTHAN	-5.89	-7.43	-3.68	-5.84
T.N.	-5.70	6.32	-8.59	-12.29
U.P.^	-1.23	-2.28	0.90	-1.78
W.B.	-10.76	-7.77	-12.29	-11.04
ALL INDIA	-6.47	-2.71	-7.27	-8.56
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 3.101

Table 4.1: Nutritional value of selective pulses, food grains and oilseeds. (value per 100 g of edible proportion)

Items	Proteins	Fat Crude	Fibre	Calcium (mg)	Phosphorous (mg)	Iron (mg)	Calories (Kcal)
Bengal Gram	17.1	5.3	3.9	202	312	4.6	360
Black Gram	24	1.4	0.9	154	385	3.8	347
Cowpea	24.1	0.7	3.8	77	414	8.6	323
Field Bean	24.9	0.8	1.4	60	433	2.7	347
Green Gram	24	1.3	4.1	124	326	4.4	334
Horse Gram	22	0.5	5.3	287	311	6.77	321
Lentil	25.1	0.7	0.7	69	293	7.58	343
Peas	19.7	1.1	4.5	75	298	7.05	315
Red Gram	22.3	1.7	1.5	73	304	3.7	335
Soyabean	43.2	19.5	3.7	240	690	10.4	432
Bajra	11.6	5	1.2	42	296	8	361
Barley	11.5	1.3	3.9	26	215	1.67	336
Jowar	10.4	1.9	1.6	25	222	4.1	349
Maize	11.1	3.6	2.7	10	348	2.3	342
Ragi	7.3	1.3	3.6	344	283	3.9	328
Rice	8.5	0.6	0	10	280	2.8	349
Sanwa	6.2	2.2	9.8	20	280	5	307
Wheat	11.8	1.5	1.2	41	306	5.3	346
Groundnut	25.3	40.1	3.1	90	350	2.5	567
Linseed	20.3	37.1	4.8	170	370	2.7	530
Mustard	20	39.7	1.8	490	700	7.9	541

Source: Usha Tuteja (2008, Pg 29)[original source Gopalan, Ramasastry and Subramaniam,1999]

Table 4.2						
PERCENTAGE OF TOTAL INTAKE OF PROTEINS DERIVED FROM DIFFERENT GROUPS OF FOOD ITEMS						
RURAL STATES	50th ROUND					
	CEREALS (C)	PULSES (P)	MILK & MILK PRODUCTS	EGG, FISH & MEAT	OTHER FOODS	C+P
ANDHRA PRADESH	67.92	10.63	7.08	5.7	8.67	78.55
ASSAM	68.21	8.56	3.58	8.56	11.09	76.77
BIHAR#	74.78	9.74	5.36	1.97	8.15	84.52
GUJARAT	66.33	11.98	12.36	1.24	8.09	78.31
HARYANA	64.43	6.1	23.53	0.65	5.29	70.53
KARNATAKA	69.06	10.83	7.05	4.29	8.77	79.89
KERALA	51.81	6.5	7.01	20.6	14.08	58.31
M.P.*	74.22	12.04	5.86	1.47	6.41	86.26
MAHARASHTRA	68.02	12.9	6.12	3.8	9.16	80.92
ORISSA	76.6	6.76	2.09	5.17	9.38	83.36
PUNJAB	56.48	9.17	25.59	0.85	7.91	65.65
RAJASTHAN	71.1	6.21	17.49	0.55	4.65	77.31
T.N.	64.21	11.11	6.12	5.81	12.75	75.32
U.P.^	70.2	10.58	10.32	1.5	7.4	80.78
W.B.	71.49	6.33	3.93	7.76	10.49	77.82
ALL INDIA	69.42	9.76	8.81	3.66	8.35	79.18
# INCLUDES JHARKHAND						
* INCLUDES CHHATTISGARH						
^ INCLUDES UTTARAKHAND						

Source: NSSO 50th Round(1993-94) Report 405 – Nutritional Intake in India

Table 4.3						
PERCENTAGE OF TOTAL INTAKE OF PROTEINS DERIEVED FROM DIFFERENT GROUPS OF FOOD ITEMS						
RURAL STATES			61st ROUND			
	CEREALS (C)	PULSES (P)	MILK & MILK PRODUCTS	EGG, FISH & MEAT	OTHER FOODS	C+P
ANDHRA PRADESH	62.14	10.68	8.47	5.91	12.8	72.82
ASSAM	63.48	9.71	4.35	9.48	12.98	73.19
BIHAR#	72.06	9.30	6.26	2.36	10.00	81.37
GUJARAT	65.2	11.09	12.6	1.06	10.04	76.29
HARYANA	59.73	6.49	25.22	0.97	7.59	66.22
KARNATAKA	62.68	11.65	9.1	4.57	12	74.33
KERALA	45.19	7.98	7.8	22.08	15.44	53.17
M.P.*	72.63	10.71	6.13	1.46	9.06	83.33
MAHARASHTRA	62.78	11.87	6.65	3.47	15.06	74.65
ORISSA	73.89	7.98	2.44	4.33	11.35	81.87
PUNJAB	58.06	9.64	23.15	0.59	8.56	67.70
RAJASTHAN	69.31	5.64	18.32	0.49	6.24	74.95
T.N.	61.56	12.98	7.43	5.7	12.3	74.54
U.P.^	68.94	9.72	9.73	1.57	10.03	78.66
W.B.	66.13	6.49	3.98	10.26	13.14	72.62
ALL INDIA	66.37	9.47	9.28	3.98	10.84	75.84
# INCLUDES JHARKHAND						
* INCLUDES CHHATTISGARH						
^ INCLUDES UTTARAKHAND						

Source: NSSO 61st Round(2004-05) Report 513 – Nutritional Intake in India

Table 4.4						
PERCENTAGE OF TOTAL INTAKE OF PROTEINS DERIEVED FROM DIFFERENT GROUPS OF FOOD ITEMS						
RURAL						
STATES	PERCENTAGE CHANGE OVER THE TWO ROUNDS					
	CEREALS (C)	PULSES (P)	MILK & MILK PRODUCTS	EGG, FISH & MEAT	OTHER FOODS	C+P
ANDHRA PRADESH	-8.51	0.47	19.63	3.68	47.64	-7.29
ASSAM	-6.93	13.43	21.51	10.75	17.04	-4.66
BIHAR#	-3.63	-4.47	16.80	19.56	22.68	-3.73
GUJARAT	-1.70	-7.43	1.94	-14.52	24.10	-2.58
HARYANA	-7.29	6.39	7.18	49.23	43.48	-6.11
KARNATAKA	-9.24	7.57	29.08	6.53	36.83	-6.96
KERALA	-12.78	22.77	11.27	7.18	9.66	-8.81
M.P.*	-2.15	-11.08	4.63	-0.87	41.40	-3.39
MAHARASHTRA	-7.70	-7.98	8.66	-8.68	64.41	-7.75
ORISSA	-3.54	18.05	16.75	-16.25	21.00	-1.79
PUNJAB	2.80	5.13	-9.53	-30.59	8.22	3.12
RAJASTHAN	-2.52	-9.18	4.75	-10.91	34.19	-3.05
T.N.	-4.13	16.83	21.41	-1.89	-3.53	-1.04
U.P.^	-1.80	-8.12	-5.74	4.58	35.51	-2.63
W.B.	-7.50	2.53	1.27	32.22	25.26	-6.68
ALL INDIA	-4.39	-2.97	5.33	8.74	29.82	-4.22
# INCLUDES JHARKHAND						
* INCLUDES CHHATTISGARH						
^ INCLUDES UTTARAKHAND						

Source: Calculated from Table 4.2, 4.3

Table 4.5						
PERCENTAGE OF TOTAL INTAKE OF PROTEINS DERIEVED FROM DIFFERENT GROUPS OF FOOD ITEMS						
URBAN STATES	50th ROUND					
	CEREALS (C)	PULSES (P)	MILK & MILK PRODUCTS	EGG, FISH & MEAT	OTHER FOODS	C+P
ANDHRA PRADESH	59.5	13.11	10.86	6.17	10.36	72.61
ASSAM	59.34	11.04	5.97	10.12	13.53	70.38
BIHAR#	66.72	10.16	7.77	3.4	11.95	76.88
GUJARAT	58.15	13.01	15.39	2.13	11.32	71.16
HARYANA	62.26	8.71	19.15	0.9	8.98	70.97
KARNATAKA	58.09	12.59	11.36	5.88	12.08	70.68
KERALA	47.49	7.18	8.63	21	15.7	54.67
M.P.*	66.26	13.07	9.24	2.33	9.1	79.33
MAHARASHTRA	56.68	12.7	11.46	5.98	13.18	69.38
ORISSA	63.21	9.88	5.94	6.22	14.75	73.09
PUNJAB	56	11.67	21.14	1.23	9.96	67.67
RAJASTHAN	67.74	8.25	15.14	1.37	7.5	75.99
T.N.	53.84	13.36	10.56	6.83	15.41	67.2
U.P.^	63.52	11.32	11.95	3.31	9.9	74.84
W.B.	58.87	8.48	7.25	10.54	14.86	67.35
ALL INDIA	59.41	11.54	11.66	5.29	12.1	70.95
# INCLUDES JHARKHAND						
* INCLUDES CHHATTISGARH						
^ INCLUDES UTTARAKHAND						

Source: NSSO 50th Round(1993-94) Report 405 – Nutritional Intake in India

Table 4.6						
PERCENTAGE OF TOTAL INTAKE OF PROTEINS DERIEVED FROM DIFFERENT GROUPS OF FOOD ITEMS						
URBAN STATES			61st ROUND			
	CEREALS (C)	PULSES (P)	MILK & MILK PRODUCTS	EGG, FISH & MEAT	OTHER FOODS	C+P
ANDHRA PRADESH	53.71	11.97	11.8	6.74	15.78	65.68
ASSAM	56.39	11.46	6.33	10.95	14.76	67.85
BIHAR#	61.08	10.48	8.44	3.06	16.91	71.56
GUJARAT	51.39	12.3	15.99	1.43	18.86	63.69
HARYANA	57.65	8.89	21.34	1.43	10.68	66.54
KARNATAKA	52.91	12.72	12.55	6.97	14.85	65.63
KERALA	41.46	8.56	9.24	23.05	16.98	50.02
M.P.*	64.95	11.70	9.58	2.25	11.46	76.65
MAHARASHTRA	54.22	13.2	11.46	5.23	15.75	67.42
ORISSA	64.44	9.7	7.21	6.76	11.9	74.14
PUNJAB	54.62	10.92	22.92	1.1	10.42	65.54
RAJASTHAN	66.03	6.12	15.47	1.22	11.17	72.15
T.N.	50.26	14.6	13.26	6.93	14.93	64.86
U.P.^	60.61	9.98	10.82	3.28	15.30	70.60
W.B.	53.39	8.09	6.98	13.83	17.67	61.48
ALL INDIA	56.16	11	12.33	5.47	14.98	67.16
# INCLUDES JHARKHAND						
* INCLUDES CHHATTISGARH						
^ INCLUDES UTTARAKHAND						

Source: NSSO 61st Round(2004-05) Report 513 – Nutritional Intake in India

Table 4.7						
PERCENTAGE OF TOTAL INTAKE OF PROTEINS DERIVED FROM DIFFERENT GROUPS OF FOOD ITEMS						
URBAN						
STATES	PERCENTAGE CHANGE OVER THE TWO ROUNDS					
	CEREALS (C)	PULSES (P)	MILK & MILK PRODUCTS	EGG, FISH & MEAT	OTHER FOODS	C+P
ANDHRA PRADESH	-9.73	-8.70	8.66	9.24	52.32	-9.54
ASSAM	-4.97	3.80	6.03	8.20	9.09	-3.59
BIHAR#	-8.46	3.19	8.67	-10.11	41.52	-6.92
GUJARAT	-11.63	-5.46	3.90	-32.86	66.61	-10.50
HARYANA	-7.40	2.07	11.44	58.89	18.93	-6.24
KARNATAKA	-8.92	1.03	10.48	18.54	22.93	-7.14
KERALA	-12.70	19.22	7.07	9.76	8.15	-8.51
M.P.*	-1.98	-10.47	3.67	-3.54	25.94	-3.38
MAHARASHTRA	-4.34	3.94	0.00	-12.54	19.50	-2.83
ORISSA	1.95	-1.82	21.38	8.68	-19.32	1.44
PUNJAB	-2.46	-6.43	8.42	-10.57	4.62	-3.15
RAJASTHAN	-2.52	-25.82	2.18	-10.95	48.93	-5.05
T.N.	-6.65	9.28	25.57	1.46	-3.11	-3.48
U.P.^	-4.57	-11.81	-9.44	-0.83	54.53	-5.67
W.B.	-9.31	-4.60	-3.72	31.21	18.91	-8.72
ALL INDIA	-5.47	-4.68	5.75	3.40	23.80	-5.34
# INCLUDES JHARKHAND						
* INCLUDES CHHATTISGARH						
^ INCLUDES UTTARAKHAND						

Source: Calculated from Table 4.5, 4.6

Table 4.8								
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - RURAL								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	50.8	39.2	49.3	63.8	49.8	38.3	47.6	60.4
ASSAM	49.5	38.7	48.7	60.3	52.7	41.3	49.8	61.9
BIHAR#	60.2	49.5	65.6	80.4	56.3	47.9	60.7	72.3
GUJARAT	55.6	41.4	51.3	66.3	53.3	42.5	52	60.5
HARYANA	78.4	49.3	64.3	94.2	69.6	45.4	56.7	78.7
KARNATAKA	55.1	43	54.8	69.1	48.8	40.6	49	60.9
KERALA	50.8	28.6	40.3	60.8	55.4	29.7	42.1	62.7
M.P.*	63	49.7	64.3	83.5	55.6	47.6	58.2	74.4
MAHARASHTRA	54.8	45.1	54.2	68.1	55.7	43.7	55.2	67.8
ORISSA	52.7	43.5	57.2	70.2	48.3	40.7	53.7	67.9
PUNJAB	74.7	47.3	58.4	83.3	66.7	43.8	56	73.4
RAJASTHAN	79.4	57	72.8	93.8	69.6	54	64.8	83.2
T.N.	46.8	33.8	46.2	60.5	44.9	33.5	43.6	55.9
U.P.^	70.4	55.8	69.3	88.5	65.7	52.8	64.3	83.2
W.B.	54.8	41.3	53.4	69.3	52	39.3	49.8	65.1
ALL INDIA	60.2	46.8	58.6	75.7	57	45.6	55.9	70.1
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 4.9			
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - RURAL			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	84.39	61.44	77.27
ASSAM	82.23	64.18	80.76
BIHAR#	100.00	61.57	81.59
GUJARAT	92.36	62.44	77.38
HARYANA	130.23	52.34	68.26
KARNATAKA	91.53	62.23	79.31
KERALA	84.39	47.04	66.28
M.P.*	104.65	59.52	77.01
MAHARASHTRA	91.03	66.23	79.59
ORISSA	87.54	61.97	81.48
PUNJAB	124.09	56.78	70.11
RAJASTHAN	131.89	60.77	77.61
T.N.	77.74	55.87	76.36
U.P.^	116.94	63.05	78.31
W.B.	91.03	59.60	77.06
ALL INDIA	100.00	61.82	77.41
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 4.8

Table 4.10			
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - RURAL			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	87.37	63.4	78.81
ASSAM	92.46	66.7	80.45
BIHAR#	98.77	66.3	83.96
GUJARAT	93.51	70.2	85.95
HARYANA	122.11	57.7	72.05
KARNATAKA	85.61	66.7	80.46
KERALA	97.19	47.4	67.15
M.P.*	97.54	64.0	78.23
MAHARASHTRA	97.72	64.5	81.42
ORISSA	84.74	59.9	79.09
PUNJAB	117.02	59.7	76.29
RAJASTHAN	122.11	64.9	77.88
T.N.	78.77	59.9	78.00
U.P.^	115.26	63.5	77.28
W.B.	91.23	60.4	76.50
ALL INDIA	100.00	65.0	79.74
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 4.8

Table 4.11				
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - RURAL				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	-1.97	-2.30	-3.45	-5.33
ASSAM	6.46	6.72	2.26	2.65
BIHAR#	-6.48	-3.23	-7.47	-10.07
GUJARAT	-4.14	2.66	1.36	-8.75
HARYANA	-11.22	-7.91	-11.82	-16.45
KARNATAKA	-11.43	-5.58	-10.58	-11.87
KERALA	9.06	3.85	4.47	3.13
M.P.*	-11.75	-4.23	-9.49	-10.90
MAHARASHTRA	1.64	-3.10	1.85	-0.44
ORISSA	-8.35	-6.44	-6.12	-3.28
PUNJAB	-10.71	-7.40	-4.11	-11.88
RAJASTHAN	-12.34	-5.26	-10.99	-11.30
T.N.	-4.06	-0.89	-5.63	-7.60
U.P.^	-6.68	-5.38	-7.22	-5.99
W.B.	-5.11	-4.84	-6.74	-6.06
ALL INDIA	-5.32	-2.56	-4.61	-7.40
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 4.8

Table 4.12								
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - URBAN								
STATES	50th ROUND				61st ROUND			
	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE	ALL MPCE CLASSES	BOTTOM 30 PERCENTILE	MIDDLE 40 PERCENTILE	UPPER 30 PERCENTILE
ANDHRA PRADESH	49.6	38.7	50.2	64.4	50.9	40	50.9	64.3
ASSAM	53.5	41	51	66	55.9	43.4	53.3	69.2
BIHAR#	61.4	51.5	64.8	79.7	64.9	53.3	67	89.8
GUJARAT	54.9	42.1	54.3	64.9	57.3	52.1	56.1	61.2
HARYANA	63.6	48	61.2	75.1	60.5	47	57.5	72.8
KARNATAKA	53.1	41.3	53.3	65.9	52.2	42.8	51.1	62.7
KERALA	52.4	35	49.2	68.4	56.7	36.2	52.3	72.7
M.P.*	59.8	50.6	61.3	71.5	57.4	50	61	66.6
MAHARASHTRA	55.5	45.2	52.3	64.2	52.1	44.3	50.8	59.1
ORISSA	57.2	44.6	57.7	72.3	55.2	45.4	58.6	74.4
PUNJAB	61.8	45.8	57.2	72.1	63.4	48.6	59.9	74
RAJASTHAN	66.5	55.4	67.3	75.7	64	54.1	65	78.1
T.N.	48.7	35.2	48.7	65.5	49.2	37.7	47.1	60.7
U.P.^	63.2	54.3	63.2	78.7	65	60.6	64.3	76.6
W.B.	56.6	43.4	55.6	68.3	55.1	43	56	64.2
ALL INDIA	57.2	45.6	56.2	69.7	57	48.6	56	66.7
# INCLUDES JHARKHAND								
* INCLUDES CHHATTISGARH								
^ INCLUDES UTTARAKHAND								

Source: 1)NSSO 50th Round(1993-94)

i) Report 402 – Level and Pattern of Consumer Expenditure

ii) Report 405 – Nutritional Intake in India

2) NSSO 61st Round(2004-05)

i) Report 508 – Level and Pattern of Consumer Expenditure

ii) Report 513 – Nutritional Intake in India

3) Own Calculations for Bottom 30, Middle 40 and Upper 30 Percentiles

Table 4.13			
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - URBAN			
STATES	50th ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	86.71	60.09	77.95
ASSAM	93.53	62.12	77.27
BIHAR#	107.34	64.62	81.30
GUJARAT	95.98	64.87	83.67
HARYANA	111.19	63.91	81.49
KARNATAKA	92.83	62.67	80.88
KERALA	91.61	51.17	71.93
M.P.*	104.55	70.77	85.73
MAHARASHTRA	97.03	70.40	81.46
ORISSA	100.00	61.69	79.81
PUNJAB	108.04	63.52	79.33
RAJASTHAN	116.26	73.18	88.90
T.N.	85.14	53.74	74.35
U.P.^	110.49	69.00	80.30
W.B.	98.95	63.54	81.41
ALL INDIA	100.00	65.42	80.63
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 4.12

Table 4.14			
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - URBAN			
STATES	61st ROUND		
	AS % OF ALL-INDIA CONSUMPTION	BOTTOM 30 PERCENTILE AS A % OF UPPER 30 PERCENTILE	MIDDLE 40 PERCENTILE AS A PERCENTAGE OF UPPER 30 PERCENTILE
ANDHRA PRADESH	89.30	62.21	79.16
ASSAM	98.07	62.72	77.02
BIHAR#	113.86	59.35	74.61
GUJARAT	100.53	85.13	91.67
HARYANA	106.14	64.56	78.98
KARNATAKA	91.58	68.26	81.50
KERALA	99.47	49.79	71.94
M.P.*	100.70	75.08	91.59
MAHARASHTRA	91.40	74.96	85.96
ORISSA	96.84	61.02	78.76
PUNJAB	111.23	65.68	80.95
RAJASTHAN	112.28	69.27	83.23
T.N.	86.32	62.11	77.59
U.P.^	114.04	79.11	83.94
W.B.	96.67	66.98	87.23
ALL INDIA	100.00	72.86	83.96
# INCLUDES JHARKHAND			
* INCLUDES CHHATTISGARH			
^ INCLUDES UTTARAKHAND			

Source: Calculated from Table 4.12

Table 4.15				
PER CAPITA PER DAY INTAKE OF PROTEINS(gms) - URBAN				
STATES	OVER THE TWO ROUNDS			
	% CHANGE IN AVERAGE CONSUMPTION	%CHANGE IN BOTTOM 30 PERCENTILE CONSUMPTION	% CHANGE IN MIDDLE 40 PERCENTILE CONSUMPTION	% CHANGE IN UPPER 30 PERCENTILE CONSUMPTION
ANDHRA PRADESH	2.62	3.36	1.39	-0.16
ASSAM	4.49	5.85	4.51	4.85
BIHAR#	5.70	3.50	3.40	12.67
GUJARAT	4.37	23.75	3.31	-5.70
HARYANA	-4.87	-2.08	-6.05	-3.06
KARNATAKA	-1.69	3.63	-4.13	-4.86
KERALA	8.21	3.43	6.30	6.29
M.P.*	-4.01	-1.19	-0.49	-6.85
MAHARASHTRA	-6.13	-1.99	-2.87	-7.94
ORISSA	-3.50	1.79	1.56	2.90
PUNJAB	2.59	6.11	4.72	2.64
RAJASTHAN	-3.76	-2.35	-3.42	3.17
T.N.	1.03	7.10	-3.29	-7.33
U.P.^	2.85	11.60	1.74	-2.67
W.B.	-2.65	-0.92	0.72	-6.00
ALL INDIA	-0.35	6.58	-0.36	-4.30
# INCLUDES JHARKHAND				
* INCLUDES CHHATTISGARH				
^ INCLUDES UTTARAKHAND				

Source: Calculated from Table 4.12

Bibliography

1. Acharya, S.S: 'Agricultural production, marketing and price policy in India: a case study of pulses', 1988.
2. Acharya, S.S: 'Oilseed and Pulses – Price policy and production performance', Indian Journal of Agricultural Economics, vol. 48(3),1993.
3. Agarwal, Sunil: 'Liberalisation of pulses sector: production, prices and imports', EPW vol 39, No. 30, July24th -30th, 2004, pg. 3391-3397.
4. Ghosh, P: 'Impact of economic reforms and macroeconomic forecasts: pulses, levels and trends' EPW vol. 40, No.-22-23, May- June 2005, pg- 2330-2340.
5. Joshi, P.K: 'Profile of pulses production in India: facts, trends and opportunities. Indian Journal of Agriculture Economics, vol- 57, No. - 3, July-Sept. 2002, Pg. 326-339.
6. Mahendra, D.S.: 'Agricultural price policy, farm profitability and food security', EPW, vol.- 45, No. 26 & 27, 26th June to 9th July, pg- 174 to 182.
7. Nadkarni, M.V: ' Backward Crops in Indian Agriculture: Economy of coarse cereals and pulses' (1986).
8. Reddy, A. A: 'Consumption pattern, trade and production potential of pulses', EPW vol 39, No. 44, Oct.-Nov. 2004, pg.- 4854 to 4860.
9. Reddy, A. A: 'Pulses production technology: status and way forward' EPW vol- 44, No. 52, 26th Dec 2009- 1st Jan,2010, pg- 53 to 80.
- 10.Sathe, D and Agarwal, Sunil: ' Liberalisation of pulses sector' (2004).

11. Technology Mission on Oil seeds, Pulses and Maize (TMOP): Towards Self Reliance, Profile of Progress (1986-98), Ministry of Agriculture, New Delhi, 1998.
12. Tuteja, Usha: 'India's pulse production: stagnation and redressal' (2008).
13. Vashistha, Perm.S: 'Slow growth crops: coarse cereals, oilseeds and pulses', Indian Journal of Agriculture Economics, vol-58, No. 1, Jan-March, 2003, pg. 32 to 36.

DATA SOURCES:

14. Agricultural statistics at a glance, various issues.
15. Economic Survey, various issues.
16. FAO (production yearbook, statistical yearbooks, country STAT).
17. Indian Council of Medical Research report, 2009.
18. NSSO 50th round (1993-94) Report 402 – Level and pattern of consumer expenditure.
19. NSSO 50th round (1993-94) Report 405 – Nutrition intake in India.
20. NSSO 61st round (2004-05) Report 508 – Level and pattern of consumer expenditure.
21. NSSO 61st round (2004-05) Report 513 – Nutritional intake in India.
22. RBI Handbook of statistics on the Indian economy, various issues.

