

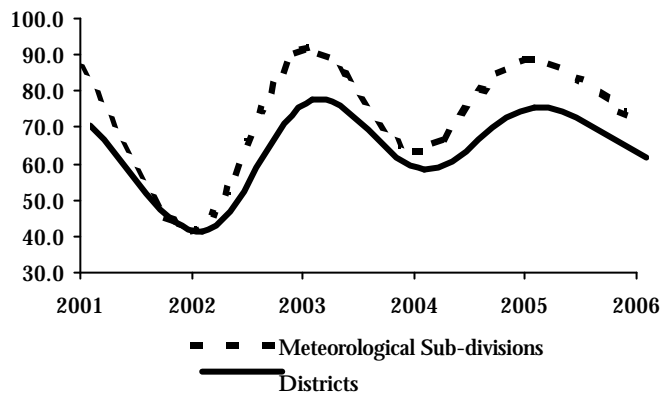
Agriculture

A.1 The South-west Monsoon

The monsoon rainfall during 2006-07 for the country as a whole was close to normal as the actual rainfall received during June-September period of this year was 99 per cent of its long-term average. The temporal distribution of rainfall, however, witnessed prolonged spells of either weak or no rainfall and its spatial distribution was also marked by disparities among various agro-climatic regions. Of the total 36 agro-meteorological sub-divisions, 26 sub-divisions covering a significant part of the country (about 59 per cent of the total 533 districts of the country) received normal to excess rainfall. Only 10 agro-meteorological sub-divisions covering approximately 41 per cent districts of the country experienced below normal rainfall. In comparison to the past three years, that is, 2003, 2004 and 2005, the distribution of monsoon rainfall during 2006 was not significantly different from the regional variations witnessed during these three years (Figure A.1).

The S-W monsoon arrived six days in advance of the normal date of its onset this year and remained very active until the first week of June and it covered western parts of peninsular India and north eastern parts of the country. Subsequently, there was an extended break in the advancement of monsoon for about two weeks followed by a revival in the rainfall activity around the last week of June. By 28th of June it had covered some more parts of peninsular India, central region

Fig A.1: Shares of Meteorological Sub-divisions and Districts with Normal Rainfall



and some northern parts of the country. The first month of the monsoon season, however, witnessed rainfall deficiency of about 13 per cent for the country as a whole.

In July the monsoon advanced further and covered some more parts of the country with a week's break in the first week of the month. And, by the last week of July the monsoon had covered the entire country with an overall deficiency of just about 2 per cent. The month of August witnessed significant improvement in the performance of monsoon rainfall particularly in the first three weeks of the month. This resulted in above normal rainfall during the month of August and the monsoon season ended with a deficiency of just about 1 per cent.

Despite some unusual aberrations in the pattern the year 2006-07, however, experienced slightly better rainfall when compared with the forecast made in July.

The overall monsoon rainfall index for the country as a whole indicates that current year's rainfall index was 2.6 per cent above its normal level and was better than the previous year's index. Of the four major zones of the country, two regions - east and west witnessed above normal rainfall as measured by the rainfall indices on the basis of un-irrigated area under foodgrains as weights. And the remaining two regions - north and south experienced 11 per cent and 6 per cent deficiency in monsoon rainfall (Table A.1). Though in comparison to last year the rainfall was satisfactory in three of the four zones - east, west and north with the exception of south.

Therefore, from an overall perspective the behaviour of monsoon rainfall during the year 2006-07 was more or less consistent with the predictions made by the IMD both before the onset of the season and during the middle of the season. This is

true for the majority of regions with a few exceptions, which witnessed moderate drought conditions. These include - Andaman and Nicobar Islands (26 per cent), Arunachal Pradesh (-29 per cent), Assam and Meghalaya (-37 per cent), western Uttar Pradesh (-43 per cent) and Haryana (-39 per cent). The other sub-divisions, where deficiency in monsoon rainfall remained between -19 to -26 per cent were - Nagaland, Manipur, Mizoram and Tripura (-21 per cent), eastern Uttar Pradesh (-23 per cent), Uttarnchal (-22 per cent), Himachal Pradesh (-23 per cent) and Tamilnadu and Pondichery (-21 per cent).

A.2 Crop Prospects for 2006-07

The preliminary estimates of Kharif output released by the ministry of agriculture do not appear to be very optimistic, which is contrary to our estimates that are based on regression equations. The

Table A.1: Deviations in the Monsoon Rainfall Indices from the Normal and from 2005-06 (June - September)

Region	From Normal Rainfall	From Last Year's Rainfall
Eastern Region	2.3	19.3
Western Region	12.2	3.1
Northern Region	-10.8	-3.0
Southern Region	-5.6	-19.0
All India	2.6	5.2

Source: Computed.

Notes:

1. These are deviations in regional level rainfall indices computed on the basis of un-irrigated area under foodgrains as weights.
2. The eastern region includes - Assam, Bihar, Orissa and West Bengal.
3. The western region includes - Gujarat, Madhya Pradesh, Maharashtra and Rajasthan.
4. The northern region includes - Haryana, Himachal Pradesh, Jammu and Kashmir, Punjab and Uttar Pradesh.
5. The southern region includes Andhra Pradesh, Karnataka, Kerala and Tamilnadu.

output of Kharif food grains as per ministry's estimates is likely to be in the region of 105 million tonnes, which is lower than our own estimate of 114.5 to 123 million tonnes (Table A.2). The ministry's estimates of Kharif output show a decline of about 4.1 per cent over the previous year's estimated production, however, our estimates show 4.1 to 12.1 per cent growth in Kharif foodgrain output. Similarly, there are differences in the predicted output of coarse cereals, which according to ministry's estimates is likely to witness 9.2 per cent fall, but as per our estimates the production of Kharif coarse cereals is expected to witness 3.9 per cent to 10.9 per cent increase. The only crop segment in the foodgrain basket for which the ministry's estimates are close to our estimates is the pulses with the difference in the estimated output being marginal.

The prospects for growth in the output of Kharif oilseeds are not very significant, which is revealed in our estimates as well despite the fact that our estimates are higher than the official estimates so far. The production of Kharif oilseeds is expected to

be in the region of 16.7 to 16.8 million tonnes, which is close to last year's output level. The output of cotton is expected to be higher than previous year's output level as per our estimates, which suggest 7.2 to 8.8 per cent growth over last year. The output of other fibre crops, jute and mesta, however, is likely to witness a slight increase from 10.7 million bales in 2005-06 to 10.9 million bales in 2006-07. Similarly the output of sugarcane, which has been witnessing an increasing trend for the last few years is also expected to witness 3 per cent to 3.6 per cent increase over last year's estimated output.

Given these prospects for agricultural output during the kharif seasons, the overall scenario for the year 2006-07 appears to be optimistic in comparison to last year. The target of kharif foodgrain production, which has been fixed at 115 million tonnes seems achievable.

For the year as a whole much will depend upon weather conditions in the post monsoon season. The overall outlook, however, appears positive on the following grounds. Firstly, the availability of water in

Table A.2: Actual Output in 2005-06 and Forecasts for 2006-07 (selected crops)

Crop	2005-06 (Million tonnes)	2006-07 (forecast) (Million tonnes)	
		Ministry's estimate	Our estimate
<i>Kharif Rice</i>	78.0	75.7	84.8 – 88.3
<i>Kharif Coarse cereals</i>	27.0	24.5	27.9 – 29.9
<i>Kharif Pulses</i>	4.7	5.0	4.8
<i>Kharif Foodgrains</i>	109.7	105.2	114.5 – 123.0
<i>Kharif Oilseeds</i>	16.8	13.2	16.7 – 16.8
<i>Cotton*</i>	19.6	18.1	21.0 – 21.3
<i>Jute and Mesta*</i>	10.7	10.9	10.7 – 11.0
<i>Sugarcane</i>	278.4	283.4	287 – 288.5

Source: Ministry of Agriculture and computed.

Notes: * Million bales.

76 major reservoirs in the country as of end- September was higher than last year, about 111 per cent of last year's storage level and 129 per cent of last ten year's average storage level. Obviously if the performance of rainfall during the post monsoon season is according to the normal expectations, this will further brighten the outlook for rabi season. Secondly, the current reports from the field do not indicate any shortage in the supply of fertilisers and insecticides and there are no indications of incidence of pest and disease attack so far. Thirdly, the Ministry of Agriculture has geared up its machinery

to increase the output of rabi crops, wheat in particular. Given the experience of last year, which witnessed approximately 8 per cent shortfall in the targeted output and compelled the government to import wheat after a gap of 6 years, the efforts to avoid such crises now would be at a high level. Accordingly the Commission for Agricultural Costs and Prices has already recommended a hike in the procurement price of wheat much in advance of the sowing season and government has also prepared a special action plan to boost the acreage under wheat.