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India

Agricultural Situation

Monsoon '2000

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Report Highlights:

With the southwest monsoon expected to touch the southern tip of India by late next week, the Indian Meteorological Department is predicting the 13th "normal" monsoon in succession.

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Indian Meteorological Department Predicts Normal Monsoon

The Indian Meteorological Department (IMD) has predicted a normal southwest monsoon for the country. If realized, it will be the thirteenth normal monsoon in succession. The monsoon is considered normal if rainfall during the entire monsoon period (June 1 to September 30) is within 10 percent of the long-period average (LPA) of 88 cm. Total precipitation for the 2000 monsoon is forecast at 99 percent of the LPA plus or minus 4 percent. The monsoon is expected to reach the southern tip of the country on or about June 1, the normal arrival date.

Apart from IMD, the Center for Mathematical Modeling and Computer Simulation (CMMACS), a government research organization located at Bangalore, also makes an "experimental" forecast of the monsoon using computer simulation techniques. According to the CMMACS forecast, the summer monsoon rainfall this year will be 91 percent (with an error bar of 3 percent) of the LPA.

The IMD's Monsoon Forecast Model - An Explanation

IMD's forecast is based on 16 regional and global land-ocean-atmosphere parameters which are believed to indicate the performance of the southwest monsoon. Although the model has been generally accurate since it was introduced in 1988 (one year after the last poor monsoon), higher forecasting errors in recent years have caused the IMD to replace 4 of the original parameters this year with new parameters having a stronger correlation to rainfall. Of the 16 parameters used this year, 10 are favorable compared with 11 last year. In the past, whenever at least 60 percent of these parameters were favorable the monsoon was normal.

Despite the overall satisfactory performance of the IMD model, its utility has been limited by its inability to accurately forecast the monsoon over space and time. Furthermore, as the forecast is made only a few days before the monsoon actually sets in, it can not influence farmers' planting intentions.

Importance of the Southwest Monsoon

The southwest monsoon provides 80 percent of India's total precipitation and is critical to the development of its major food and commercial crops such as rice, coarse grains, pulses, peanuts, soybeans and cotton. It also is the country's major source of drinking water, particularly in northwest India, which is currently suffering from drought. The country's economy is to a large extent dependent on monsoon rains.