

## **ASSESSMENT OF LOW RAINFALL IMPACT ON THE GROUND WATER LEVEL OF 27 VILLAGES IN MEERUT (UP) DURING MONSOON - 2009**

**Ashok Kumar**

**BP Dhyani,**

Department of Soil Science, College of Agriculture,  
Sardar Vallabhbhai Patel University of Agriculture & Technology,  
Meerut-250110

**UP Shahi**

**AP Singh**

Executive Engineer, Meerut Division, Ganga Canal, Meerut.

### **ABSTRACT**

The excessive discharge of water with low recharging may have adverse effect on ground water level which ultimately affects the total water balance available for drinking and irrigation purposes. Rainfall is the only source contributing for recharging of ground water. Meerut which is located at 29° 4' N latitude, 77° 42' E longitude and at 237 msl receives approx. 805 mm annual normal rains in which monsoon rainfall is 650mm. During June-August, 2009 due to poor monsoon only 40% rain had been received. As far as month wise is concerned only 1.16, 60.3 and 4.99% rains were observed as against to normal rainfall of corresponding months. Due to poor rainfall, ground water which is the only substitute of water for irrigation to save the crops was exploited excessively, as consequences approx. 16% of Govt. tubewell failed to pump out the continuous water from the ground. The moisture status of many soils of the rice fields reaches near to Permanent Wilting Point (15 bar or 17.18 to 23.3 % soil moisture). Hence, monitoring of ground water level is one of the important issues because ground water is an important source of water for domestic, agricultural and industrial consumption. Keeping this thing in mind the fluctuation in ground water level of 27 villages was measured. Data recorded during June to August 31, 2009 shows that maximum & minimum 86 & 11cm, respectively with an average decline of 38cm in water level was recorded. Declining of ground water @13cm/

month is a matter of high concern. A continuous declining trend in ground water level has recorded in pockets of more than 370 districts in the country. Ground water, being a hidden resource, is the key for sustainability of agricultural production. Thus, ground water management not only requires proper assessment of available resource and understanding of interconnection between surface and ground water system but also there is a need to re-orient our approach to ground water management.