



Research Article

## Evaluatouon of soil fetility status of available N, P and K in inceptisol of Baloda block Janjgir district of Chhattisgarh

■ G. K. JATAV AND V. N. MISHRA

Received : 12.03.2012; Revised : 16.05.2012; Accepted : 25.05.2012

MEMBERS OF RESEARCH FORUM :

**Corresponding author :**

**G. K. JATAV**, Department of Soil Science and Agricultural Chemistry, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA  
Email: gouravjatav143@gmail.com

**Co-authors :**

**V. N. MISHRA**, Department of Soil Science and Agricultural Chemistry, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA

### Summary

Grid based (GPS) surface (0-15 cm) soil samples by systematic survey were collected from 87 villages in Baloda block where 1003 samples were identified from *Inceptisol*. These soil samples were analyzed for N, P and K and categorized as low medium and high as per criteria followed in the soil testing laboratory. Based upon the coefficient of correlation between macronutrients and soil properties, a significant and positive correlations observed between soil pH and available N, P, K. Electrical conductivity exhibited significant and positive relationship with available N, P, K and organic C showed significant and positive correlation with available N and K.

**Key words :** Fertility status, Major nutrients, Inceptisol

**How to cite this article :** Jatav, G.K. and Mishra, V.N. (2012). Evaluatouon of soil fetility status of available N, P and K in inceptisol of Baloda block Janjgir district of Chhattisgarh. *Asian J. Soil Sci.*, 7(1): 62-65.

## Introduction

In view of the finite nature of natural resources, their management in a sustained fashion has become an issue of primary concern. Sustainability of the agricultural production systems is the most crucial issue in this part of the green revolution. A system is sustainable when it improves or at least maintains the quality of soil, water and atmosphere. Application of chemical fertilizers has been rated as one of the most important production factor affecting the sustainability. The increasing population has forced farmers to make use of high doses of chemical fertilizers. Its unscientific use (nutrient imbalances, incorrect amounts) is a serious threat to sustainable agricultural production system.

Soil test-based fertility management is an effective tool for increasing productivity of agricultural soils that have high degree of spatial variability resulting from the combined effects of physical, chemical or biological processes (Goovaerts, 1998). However, major constraints impede wide scale adoption of soil testing in most developing countries. In India, these include the prevalence of small holding systems of farming as well as lack of

infrastructural facilities for extensive soil testing (Sen *et al.*, 2008). Soil testing provides information regarding nutrient availability in soils which forms the basis for the fertilizer recommendations for maximizing crop yields. Soil testing program is beneficial to formulated specific fertilizer recommendations.

### Study area :

Baloda is a town and a Nager Panchayat in Janjgir-Champa district in state of Chhattisgarh, India. It is located 22.15° North latitude, 82.48° East longitude with an altitude of 280 m above the mean sea level. The location of study area is shown in the map of Janjgir district of Chhattisgarh state. The *Inceptisol* group of the soil covered under the different villages of the Baloda block in Janjgir district of Chhattisgarh has been taken for fertility evaluation on various aspects.

## Resources and Research Methods

### Collection of soil samples:

Baloda is a Taluka comes under Janjgir district in the state of Chhattisgarh, and about 87 villages come under this