

## Research Article

# Characterization of wastelands in eastern zone of Karnataka for their physico chemical properties and use of agro industrial organic wastes as nutrient source

■ G.V. PRABHAKARAREDDY, C.A. SRINIVASAMURTHY, B.G. VASANTHI AND M.S. NAGARAJA

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### MEMBERS OF RESEARCH FORUM :

#### Corresponding author :

G.V. PRABHAKARA REDDY, Nokia L  
and C, BENGALURU (KARNATAKA)  
INDIA  
Email: [vasubgkvk@gmail.com](mailto:vasubgkvk@gmail.com)

#### Co-authors :

C.A. SRINIVASAMURTHY AND M.S.  
NAGARAJA, Department of Soil  
Science and Agricultural Chemistry,  
University of Agricultural Sciences  
(G.K.V.K.), BENGALURU  
(KARNATAKA) INDIA

B.G. VASANTHI, Krishi Vigyan  
Kendra, Hadonahalli, BENGALURU  
(KARNATAKA) INDIA

### Summary

Physically degraded lands are characterized with high graveliness and low nutrient status resulting in sparse vegetation hence, external supplementation of nutrients is essential for successful vegetation establishment. The soil pH and EC was similar to that of normal soil in degraded lands. However, the organic carbon and nutrient status were low in wastelands with higher BD of  $1.62 \text{ gcc}^{-1}$ . The evaluation of different organic wastes such as paper mill sludge, sugar mill sludge, distillery sludge and municipal sludge along with FYM as a nutrient source for degraded lands revealed that N and P content was highest in sugar mill sludge followed by municipal sludge while K content and secondary nutrients such as calcium and sulphur were found highest in distillery sludge. In case of micro nutrients high levels of Fe (1550 ppm) and Mn (407 ppm) was observed in paper mill and sugar mill sludge, respectively. The Zn (2329 ppm) and Cu (448.4 ppm) were recorded in municipal sludge. The different organic sources were rated as sugar mill sludge, municipal sludge, distillery sludge, FYM, paper mill sludge.

**Key words :** Degraded lands, Organic sludges, Nutrient sources

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