



RESEARCH PAPER

Nutritional constraints for nut drop of arecanut in Western Ghats soils of Uttara Kannada of Karnataka in India

G.R. RAJAKUMAR¹ AND S.V. PATIL*

Department of Agronomy, Regional Horticultural Research and Extension Centre, UHS Campus, G.K.V.K.

BENGALURU (KARNATAKA) INDIA

(Email : sangappavpatil@gmail.com)

Abstract : In recent years, nut drop in arecanut crop is becoming a common problem in Western Ghats soils of Uttara Kannada district. To find out the reasons for nut drop in arecanut, a research was conducted during 2010-11 and 2011-12 in the area involving survey of nut drop affected fields, collection of soil samples from the affected fields and their analysis. The soils were analysed for pH, EC, organic carbon, available NPK, DTPA-Zn and available boron. The soils of the area match with the laterite characters. The initial data (before onset of monsoon) indicated that the soils were acidic in lower depths while neutral in surface soils, low in EC, low in available P, DTPA-Zn and available boron. The available K was low to medium. However, the soils were found medium to high in organic carbon and available N. The soil samples were also collected after receipt of rainfall and analyzed. The results indicated that the soil pH was slightly lowered but EC and available K were lowered more as compared to initial values. Similarly the organic carbon and available N were increased but DTPA-Zn and available B were remained low and not affected much as compared to initial status. Depth-wise soil analysis indicated that surface soil were having more acidic pH, low salts, higher organic C, higher available NPK than sub-soils. Further, these were lowered after receipt of rain, particularly EC and potash. The available Zn and B remained deficient. The available K, DTPA-Zn and available B were found to be deficient in these soils and need to be corrected immediately after heavy rains. The nutrients and other soil properties status if not improved may become constraints for nut drop in arecanut. To improve the soil pH, it is necessary to apply lime / dolomite, to improve EC level and available potash status of soil there is a need to apply extra dose of potash to soil than the recommended dose. To increase available P in acidic soils, there is a need to apply rock phosphate. Since the available N is medium to high, the recommended N may be continued. The recommended dose of Zn and B have to be applied before onset of monsoon and if nut drop prevails these have to be applied immediately after receipt of rains.

Key Words : Nutrient constraints, Arecanut, Heavy rainfall, Acid soils, Laterite

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* Author for correspondence:

¹Department of Natural Resource Management, College of Forestry (U.A.S.), SIRSI (KARNATAKA) INDIA (Email: rajkumargr@uasd.in)