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## Geospatial approaches for micro level farm planning - A step to enhance crop productivity

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Soil and water are the most important natural resource required for crop production. Its inventory, characterization, and suitability assessment for crops is essential for conserving these natural resources and enhance crop productivity. An attempt is made to provide micro level farm planning at 1:10,000 scale using geospatial approaches in Honnenahalli micro- watershed located at 75° 54' 54.24" East longitude and 14° 35' 96" North latitude in Karnataka, India. The detailed land resource inventory facilitated is arriving at 29 management units in 963 hectares of micro watershed. The fertility status was also assessed using standard procedures for estimation of nutrients. Soil and water resource were assessed and mapped using Remote Sensing, GPS and GIS techniques. Land suitability for major crops (Maize, paddy, Custard apple, Lime, etc) was assessed and land capability classification was worked out. The final management plan in terms of soil and water conservation measures (contour bunding, conservation furrow, inter bund management, farm pond, etc.), soil health management (suitable amendments for soil amelioration, fertilizer recommendation for crops based on soil test results) and crop planning (crops and suitable cropping systems with varieties for agriculture, horticulture and forest component and sowing time) was provided for micro level planning by the implementing agency. The adoption of management plan would enable in changing crops and cropping system based on scientific data and enhances agricultural productivity and livelihood security.

### Biography

Sathish Ayyappa has completed his PhD from University of Agricultural Sciences, Bengaluru, India by securing University Gold Medal. He is presently working as Soil Physicist at All India Co-ordinated Research Project for Dryland Agriculture, University of Agricultural Sciences, Bengaluru in India. He has published more than 20 papers in reputed journals. He is the recipient of Vasant Rao Naik National award for best Dryland Research in India during 2014-15. He is guiding students in Master's degree programme in Soil Science at the University. He is also working in two international projects.

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