

RESEARCH ARTICLE

Effect of site specific nutrient management on production and productivity of maize (*Zea mays* L.) under mid hill condition of Chhatisgarh

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SUMMARY

A field experiment was conducted in two consecutive *Kharif* seasons of 2012 and 2013 at Ambikapur to work out the effect of nutrient management on growth and development behavior of maize (*Zea mays* L.) hybrids. Plant height, leaf-area, dry matter accumulation, and crop growth rate (CGR) were significantly higher with site-specific nutrient management (SSNM) over the recommended dose of fertilizer (RDF) under conservation agriculture. On the maize hybrids, 'PMH 3' recorded significantly highest plant height, dry-matter accumulation and crop growth rate at various stages which was at par with 'PMH 1' but significantly superior to other hybrids. Significantly lowest leaf- area, dry matter accumulation and crop growth rate was recorded with 'HQPM 1'. SSNM recorded highest yield attributes, viz., cob length (cm), cob girth (cm), grain rows/cob, grains/row, shelling per cent and 1000 grain weight (g) significantly higher over 50 per cent RDF but at par with 100 per cent RDF. SSNM recorded significantly highest cob yield and grain yield (kg/ha) over 100 and 50 per cent RDF. With regards to maize hybrids 'PMH 3' recorded yield attributes, viz., cob length (cm), cob girth (cm), grain rows/cob, grains/row, shelling per cent and 1000 grain weight (g) which was at par with 'PMH 1' but significantly superior to other hybrids. Significantly lowest yield was recorded by 'HQPM 1'.

Key Words : Maize, Site specific nutrient management, Crop growth rate, Leaf area

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