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Response of *Rabi* maize (*Zea mays* L.) varieties to different levels of nitrogen for green forage yield under middle Gujarat conditions

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ABSTRACT : A field experiment was conducted at the College Agronomy Farm, Anand Agricultural University, Anand to find out the response of *Rabi* maize (*Zea mays* L.) varieties to different levels of nitrogen for green forage yield under middle Gujarat conditions during *Rabi* season of 2012-13. The experiment consisted of twelve treatment combinations comprised of three varieties (African tall, GM-3 and GM-4) and four nitrogen levels (80, 100, 120 and 140 kg N ha⁻¹). Significantly the highest green forage (543.62 q ha⁻¹), dry matter (125.29 q ha⁻¹) and crude protein (6.56 q ha⁻¹) yields of forage maize were recorded by African tall variety over the variety GM-3 and GM-4. The green forage, dry matter and crude protein yields were significantly influenced by nitrogen levels. Application of nitrogen at 140 kg ha⁻¹ produced significantly higher green forage (543.40 q ha⁻¹), dry matter (113.53 q ha⁻¹) and crude protein (6.25 q ha⁻¹) yields as well as crude protein content (5.53 %). The higher net realization of 21282 Rs. ha⁻¹ and higher B.C.R. value of 1.09 were recorded in variety African tall. Among different nitrogen levels, application of 140 kg N ha⁻¹ resulted in higher net realization (Rs. 19129 ha⁻¹) with B.C.R. of 1.05.

KEY WORDS : *Rabi* maize, Nitrogen, Green forage

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