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# Effect of different planting methods and nitrogen levels on the quality of *Kharif* maize (*Zea mays* L.)

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**ABSTRACT :** A field experiment was conducted during *Kharif* 2015 at Punjab Agricultural University, Ludhiana, to study the effect of planting methods (flat, ridge and bed) and five nitrogen levels (0, 90, 120, 150 and 180 kg N ha<sup>-1</sup>) on the quality of maize. Among different planting methods, bed planting produced significantly higher yield of *Kharif* maize as compared to flat sowing method. Maximum grain yield of 58.5 q ha<sup>-1</sup> was recorded in bed planting methods which was statistically at par with ridge sowing method (57.3 q ha<sup>-1</sup>) but was significantly higher than that recorded under flat sowing (52.6 q ha<sup>-1</sup>). Similar trend was recorded in stover yield. Different planting methods did not significantly influence the protein content, total sugars, starch content, oil content,  $\beta$ - carotene, total carotenoids and total minerals in maize grains. Among nitrogen levels, 150 kg N ha<sup>-1</sup> gave significantly higher grain yield over 120, 90 and control but at par with 180 kg N ha<sup>-1</sup>. Similar trend was also observed in stover yield. However; application of 180 kg N ha<sup>-1</sup> recorded significantly higher protein content and total minerals than all the nitrogen levels except 150 kg N ha<sup>-1</sup>. Application of 180 kg N ha<sup>-1</sup> recorded low total sugars than other nitrogen level but it was at par with 150 kg N ha<sup>-1</sup>

**KEY WORDS :** Maize, Planting methods, Nitrogen levels, Yield, Quality

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