

Response of planting geometry and nitrogen on quality production of baby corn (*Zea mays* L.)

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ABSTRACT : Field experiment was carried out at Norman E. Borlaug Crop Research Centre, G. B. Pant University of Agriculture and Technology, Pantnagar during spring season of 2012 to study the effect of planting geometry and nitrogen on quality production of baby corn (*Zea mays* L.). The soil of experimental plots was sandy loam in texture with neutral pH (6.98), rich in organic carbon (0.72 %), low in available nitrogen (207.1 kg/ha) and medium in available phosphorus (18.8 kg/ha) and available potassium (255.80 kg/ha). The experiment consisted of 12 treatments with 4 planting geometries (45cm x 15cm, 45cm x 20cm, 65cm x 15cm and 65cm x 20cm), in main plot and 3 nitrogen levels (120, 150 and 180 kg N/ha), in sub plot was laid out in split plot design (SPD) with three replications. The field emergence, plant population, plant height, leaf area index, dry matter accumulation, length of cob, girth of cob, number of cobs/ha, cob yield, baby corn yield green fodder yield, TSS, protein content, N, P and K content in baby corn and green fodder, N, P and K uptake and economics were influenced significantly by planting geometry and nitrogen levels. Crop grown under planting geometry of 45cm x 20cm recorded 11.8%, 33.3% and 18.5% higher baby corn yield than 45cm x 15cm, 60cm x 15cm and 60cm x 20cm planting geometries, respectively. The planting geometry 65cm x 15cm gave significantly higher TSS and protein content in baby corn. The N, P and K content in baby corn was observed significantly higher at 65cm x 20cm but its uptake was recorded significantly higher at 45cm x 20cm, respectively. Similarly, 45cm x 20cm planting geometry gave significantly highest gross return, net return, B: C ratio and net profit per day.

Key Words: Baby corn, mollisols, nitrogen, planting geometry, quality.