A field experiment was conducted during 2015-16 and 2016-17 at Agricultural Research Institute, Rajendranagar, Hyderabad to assess the performance of two cotton cultivars Bt (MRC 7201 BGII) and non-Bt (WGCV-48) in response to plant densities (P₁: 18,518 plants ha⁻¹, P₂: 55,555 plants ha⁻¹ and P₃: 1,48,148 plants ha⁻¹) and nitrogen fertilization (120, 150 and 180 kg N ha⁻¹). During 2015 and 2016, among the two cultivars (V₁: MRC 7201 BGII, V₂: WGCV-48), MRC 7201 BGII cultivar seed cotton yield (3497, 2866 kg ha⁻¹), gross returns (1,36,396 and 1,14,629 Rs. ha⁻¹), net returns (87226, 65514 Rs. ha⁻¹) and B:C ratio (2.9, 2.5) over V₂: WGCV-48 cultivar. Among the plant densities, the highest gross returns (1,29,427 and 1,09,045 Rs. ha⁻¹), net returns (88,146 and 68,208 Rs. ha⁻¹) and B:C ratio (3.1 and 2.7) were observed with P₂: 60 cm x 30 cm (55,555 plants ha⁻¹) and was followed by P₃: 45 cm x 15 cm (1,48,148 plants ha⁻¹) and P₁: 90 cm x 60 cm (18,518 plants ha⁻¹). Effect of nitrogen levels did not exert any influence on gross returns, net returns and B: C ratio. In 2015 and 2016, maximum total nitrogen uptake (kg ha⁻¹) as observed in MRC 7201 BGII cultivar at square initiation (7.1, 7.0 kg ha⁻¹), flower initiation (55.5, 34.5 kg ha⁻¹), boll development (104.2, 112.5 kg ha⁻¹) and first picking (161.3, 124.7 kg ha⁻¹) and significantly superior to WGCV-48 cultivar. Among the plant densities, the highest nitrogen uptake was observed in P₃: 45 cm x 15 cm (1,48,148 plants ha⁻¹) at square initiation (13.5, 13.4 kg ha⁻¹), flower initiation (80.3, 46.4 kg ha⁻¹), boll development (146.0, 154.8 kg ha⁻¹) and first picking (190.5, 181.2 kg ha⁻¹) and significantly superior to P₂: 60 cm x 30 cm (55,555 plants ha⁻¹) and P₁: 90 cm x 60 cm (18,518 plants ha⁻¹).