

## EFFECT OF INTEGRATED NITROGEN MANAGEMENT ON ECONOMICS OF *DESI* WHEAT

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**Abstract:** To explore the extent of substitution of nitrogen fertilizer in wheat to find out the suitable combination of fertilizers and organic manures for higher economic return present study entitled, “Compensating nitrogen fertilizer requirement of *desi* wheat through *Azotobacter* and vermicompost” was conducted at the Agronomy Research Farm of Chaudhary Charan Singh Haryana Agricultural University, Hisar during the *rabi* season of 2017-2018 to study the effect of *Azotobacter* and vermicompost on economics of *desi* wheat. The soil of the experimental field is sandy loam in texture, slightly alkaline in reaction, low in organic carbon and nitrogen, medium in available phosphorus and potassium. The experiment consisted of 10 treatments viz., T<sub>1</sub> (Control), T<sub>2</sub> (Vermicompost @ 6 t ha<sup>-1</sup>), T<sub>3</sub> (*Azotobacter* + Vermicompost @ 6 t ha<sup>-1</sup>), T<sub>4</sub> (30 kg N ha<sup>-1</sup> + Vermicompost @ 3 t ha<sup>-1</sup>), T<sub>5</sub> (40 kg N ha<sup>-1</sup> + Vermicompost @ 2 t ha<sup>-1</sup>), T<sub>6</sub> (50 kg N ha<sup>-1</sup> + Vermicompost @ 1 t ha<sup>-1</sup>), T<sub>7</sub> (30 kg N ha<sup>-1</sup> + *Azotobacter* + Vermicompost @ 3 t ha<sup>-1</sup>), T<sub>8</sub> (40 kg N ha<sup>-1</sup> + *Azotobacter* + Vermicompost @ 2 t ha<sup>-1</sup>), T<sub>9</sub> (50 kg N ha<sup>-1</sup> + *Azotobacter* + Vermicompost @ 1 t ha<sup>-1</sup>) and T<sub>10</sub> (60 kg N ha<sup>-1</sup>). Among various combinations of nitrogen fertilizer, vermicompost and *Azotobacter* treatments, T<sub>10</sub> recorded significantly higher gross returns, net returns and benefit: cost ratio of *desi* wheat.

**Keywords:** Wheat, B:C, Economics, *Azotobacter*, Vermicompost, Fertilizer

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