

**RESEARCH ARTICLE :**

## Response of wheat (*Triticumaestivum* L.) to integrated nitrogen management and their residual effect on succeeding forage cowpea (*Vignaunguiculata* L.)

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**ARTICLE CHRONICLE :**

**Received :**

11.07.2017;

**Accepted :**

25.08.2017

**SUMMARY :** Field experiment was conducted at B. A. College of Agriculture, Anand (Gujarat) during Rabiseason of 2012-13 and 2013-14 to evaluate Response of wheat (*Triticumaestivum* L.) to integrated nitrogen management and their residual effect on succeeding forage cowpea (*vignaunguiculata* L.). Seven Nitrogen management treatments through chemical fertilizer and manures and three levels of Bio-fertilizer inoculation were replicated three times. Result of the experiment revealed that 75% RDN + 25% RDN from FYM when applied in the wheat it produced higher growth, yield attributing characters, grain yield (3716 kg ha<sup>-1</sup>) and net returns (Rs. 29304 ha<sup>-1</sup>) while, application of 100% RDN (120 kg N) produced higher straw yield (7771 kg ha<sup>-1</sup>) of wheat. The seed inoculation with *Azotobacterchroococum* and *Azospirillum lipoferum* maximize the growth, yield attributing characters, yields of wheat (3328 kg ha<sup>-1</sup>) and secured higher net return (Rs. 21932 ha<sup>-1</sup>). However, green fodder (275 q ha<sup>-1</sup>), dry matter yield of succeeding forage cowpea (66 q ha<sup>-1</sup>) were significantly influenced by residual effect of treatment 25% RDN + 25% from FYM + 25% from VC + 25% from CC. *Azotobacter* + *Azospirillum* inoculation treatment were maximize green fodder 250 and dry fodder yield 60 q ha<sup>-1</sup> of wheat-forage cowpea sequence in sandy loam soils under middle Gujarat Agro-climatic conditions.

**KEY WORDS :**

Wheat, Residual, Forage, Cowpea

**How to cite this article :** Suryawanshi, P.K., Pagar, V.D., Kalasare, R.S. and Sadhu, A.C. (2017). Response of wheat (*Triticumaestivum* L.) to integrated nitrogen management and their residual effect on succeeding forage cowpea (*Vignaunguiculata* L.). *Agric. Update*, **12** (TECHSEAR-10) : 2697-2701.

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