

## IMPACT OF RICE RESIDUE MANAGEMENT OPTIONS AND FERTILIZERS ON YIELD AND YIELD ATTRIBUTES OF WHEAT (*TRITICUM AESTIVUM* L.)

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**Abstract:** A field experiment was conducted at research farm, KVK, Panipat, CCS Haryana Agricultural University, Hisar during the *rabi* season 2018-19 and 2019-20 with the objective to study the impact of rice residue management options and fertilizer doses on productivity of wheat. The treatments applied to wheat consist of four rice residue management practices (R<sub>1</sub>: Residue removal, R<sub>2</sub>: Residue Burning, R<sub>3</sub>: Residue Incorporation and R<sub>4</sub>: Residue Retention and direct seeding of wheat with happy seeder into standing rice stubbles) in main plot and different doses of NPK fertilizers (F<sub>1</sub>: Control, F<sub>2</sub>:100% N + 50% Recommended dose of P&K, F<sub>3</sub>:100% N + 75% RD of P&K, F<sub>4</sub>: 100% N 75% RDF+ Waste decomposer and F<sub>5</sub>:100% Recommended dose of NPK fertilizer) in sub main plot. The grain and straw yield of wheat follow the trend: Removal>Retention>Burning>Incorporation during 2018-19 and Retention>Burning>Removal>Incorporation during 2019-20. The growth, yield and yield attributes of wheat (*viz.* number of tillers/row length, grains per spike) was observed significantly higher under residue removal and 100% NPK fertilizer doses treatment during 2018-19 and under residue retention and 100% NPK fertilizer doses treatment during 2019-20. However test weight of grains was recorded higher under the retention treatment during both the years of study. There was no saving of fertilizers with residue management practices; however under burning condition, the wheat yield observed under 100 % RDF was statistically at par with 75% PK + 100% N treatment. Retention of rice straw and wheat sowing with happy seeder can be a better option for rice straw management under rice –wheat cropping system.

**Keywords:** Wheat, Residue management, Yield attributes

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