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[\[PDF \(491K\)\]](#) [\[References\]](#)**Effects of Crop Residue and Nitrogen Rates on Yield and Yield Components of Two Dryland Wheat (*Triticum aestivum* L.) Cultivars**[Hossein Sadeghi](#)¹⁾ and [Mohammad Jafar Bahrani](#)¹⁾

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Abstract: In most southern parts of Iran, wheat (*Triticum aestivum* L.) residues have been traditionally burned or removed; that is often criticized for soil organic and nutrient losses, reducing soil microbial activity and increasing CO₂ emission. A 2-years (2005–2007) field study was carried out at the College of Agriculture, Shiraz University, Shiraz, Iran, to evaluate the influence of crop residues management and nitrogen (N) rates on dryland wheat. The experiment was conducted as strip split plot with four replications. Horizontal plots were three crop residues rates (0, 500 and 1000 kg ha⁻¹), vertical plots consisted of two dryland current wheat cultivars (CVs) (Azar 2 and Nicknejad), and sub-plots were three N rates (0, 35, and 70 kg N ha⁻¹). Increasing crop residue rates increased soil organic carbon. Number of spike per plant, grains per spike, grains per plant and 1000-grain weight of both CVs significantly increased with increased N and residue rates in both years. The lowest grain yield was obtained from 1000 kg ha⁻¹ residue incorporation without N application showing the soil N imbalance. The optimum crop growth and the highest grain yield was achieved from the highest crop residues and N rates, indicating that the most reliable system for dryland wheat production in the region is complete residues incorporation into the soil following disking, seeding with chisel seeder and application of 70 kg N ha⁻¹.

Keywords: [Crop residue](#), [Dryland wheat](#), [Grain yield](#), [Nitrogen rates](#)[\[PDF \(491K\)\]](#) [\[References\]](#)

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