

Appropriate Nutrient Management for Wheat Production in Afghanistan

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Abstract : The use of sulfur fertilizer by Afghanistan farmers for wheat production has never been practiced, although sulfur deficiency has been expected for wheat production. A field experiment was conducted at Poza e Ishan Research Station Farm, Baghlan province, Afghanistan to examine the effect of sulfur fertilizer on growth and yield components of wheat. The experiment was laid out in randomize complete block design (RCBD), having three replications and eight treatments. The initial soil of experiment was alkaline (pH8.4), with textural class of sandy clay loam, available sulfur (40.8) mg kg⁻¹, and Olsen-P (28.8) mg kg⁻¹. Wheat variety, Kabul 013 was cultivated from November 2015 to June 2016. The recommended doses of nitrogen and Phosphors (Urea and DAP at 250 and 125 kg ha⁻¹) were applied by broadcasting except control plot. Sulfur was applied by foliar spray (K₂ SO₄) at the rate of 10, 20, and 30 kg ha⁻¹, split at tillering and flowering stages. The results demonstrated that sulfur application positively influenced on growth and yield of wheat crop with combination of nitrogen. Plant did not respond to sole sulfur application. Plant height, spike length, spikelet's number spike⁻¹, were increased and yield g m⁻² was also increased by 1.2, 19.1 and 25.1 % for 10, 20 and 30 kg sulfur ha⁻¹ application.

Keywords : sulfur, nitrogen, wheat, foliar

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