

عنوان مقاله:

Seed Priming Influence on Growth, Yield, and Grain Biochemical Composition of Two Wheat Cultivars

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خلاصه مقاله:

The influence of seed priming on the growth, amino and fatty acids contents of two wheat (*Triticum aestivum* L.) cvs. Keumkang and Backjung were evaluated through pot experiments in greenhouse and at field conditions. Four priming treatments involving three soaking media: ۲.۵% potassium Chloride (KCl), ۱% potassium Sulfate (K₂SO₄), distilled water (H₂O) and unprimed (dry seeds) as the control were laid out in a randomized complete block design with four replications for each experimental condition. Under greenhouse condition, ۱% K₂SO₄ priming enhanced growth and yield of wheat, while ۲.۵% KCl reduced the dry matter yield in Keumkang, but not in Backjung. In field condition, ۱% K₂SO₄ improved the growth of both cultivars and increased the yield of Backjung, while ۲.۵% KCl in Keumkang had the lowest yield. Overall, this study showed that seed priming with ۲.۵% KCl and ۱% K₂SO₄ triggered specific changes in the Amino Acids (AA) and Fatty Acids (FA) compositions in grain and had carry-over effects on the plant's metabolic adjustments, which were specific to the cultivar and the growing environmental conditions. The compositional changes in AA and FA induced by seed priming have a profound impact on grain and flour quality of wheat

کلمات کلیدی:

Amino acid profile, Fatty acid profile, Potassium chloride, Potassium sulfate, *Triticum aestivum* L

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