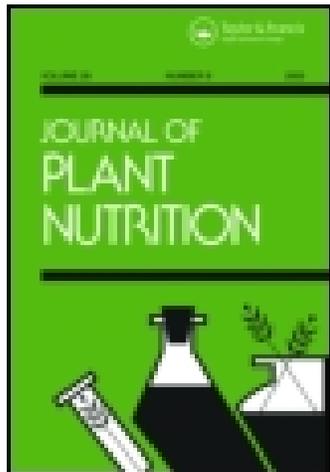


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Influence of Foliar Iron Fertilization Rate on the Breakage Susceptibility of Wheat Seeds

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Influence of Foliar Iron Fertilization Rate on the Breakage Susceptibility of Wheat Seeds

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ABSTRACT

The objectives were to determine the effect of different levels of foliar iron fertilization on the some physical properties and breakage susceptibility of wheat seed. Foliar iron treatments were combinations of three fertilization rates (0 (control), 1.2 and 2 L ha⁻¹, Fusin) at three replications. The harvested seeds were then subjected to impact energies of 0.1 and 0.2 J, at moisture contents of 8.5, 15, 20 and 25% (w.b.), using an impact test apparatus. Results indicated that the values of the seed physical properties increased with increasing iron rate. Iron fertilizer rate, moisture content and the interaction between two variables significantly influenced breakage susceptibility of wheat seeds at the 1% probability level (P<0.01). Resistance to the breakage of wheat seeds increased following a polynomial relationship with increase in the foliar iron rate. Increasing the rate of foliar iron from 0 to 2 L ha⁻¹ caused a significant decrease in the mean values of damage

by a factor of 1.8 from 66.188 to 36.688%. As the moisture content of the seeds increased from 8.5 to 25%, the amount of the percentage breakage of seeds decreased, as a polynomial. The maximum rate of decrease in the damage to seeds, with increasing moisture content, was obtained at higher iron fertilizer rates.

Keywords

Wheat, mechanical damage, harvesting, handling, fertilization, foliar iron