Nitrogen Fertilization in the Physico-Chemical and Technological Properties of Wheat Genotypes

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Wheat (*Triticum aestivum* L.), monocot family Poaceae (grasses), is the second most produced cereal and first in area of cultivation in worldwide. Its importance for industry is due to technological and nutritional properties, provided by carbohydrate, protein, fat, and small amounts of vitamins and minerals. The accelerated global market requires high productivity of raw materials coupled with quality and safety. Alternative practices such as efficient use of fertilizers, as well as peculiar factors affect the culture quality as cultivar, soil fertility, climate, managing practices, pest and microbial contamination. The objective of this study was to evaluate the effect of nitrogen fertilization (N) on physico-chemical and technological properties of wheat genotypes in till system after soybean crop, in Ponta Grossa - PR. Two genotypes (BRS 208 and BRS Pardela) and four N doses (0, 40, 80 and 120 kg ha⁻¹), applied top-dressing at tillering (20 days after emergence) were evaluated. The experimental was randomized block factorial design 1 x 4 (genotype x N doses), with four replications. The physico-chemical (moisture, protein, lipid, ash, total carbohydrates and starch) and technological properties of wheat grain were evaluated. Significant data (p<0.01) showed negative correlation between N doses and hectoliter weight (r²=0.86) and lipids (r²=0.83), while positive correlation occurred with ash (r²=0.99, p<0.05). Significant difference (p<0.05) was observed between the two genotypes for all technological properties analyzed, with exception flour extraction and luminosity (L*), and for all the physico-chemical components analyzed, with exception moisture.

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