## D-D4-05

# Characteristics of Korean wheat lines containing rye chromatin

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Twelve of Korean wheat lines containing rye chromatin were developed to increase stress tolerance and agricultural traits, flour and noodle characteristics were evaluated. In agricultural characteristics, heading date of wheat-rye translocation lines was April 23~April 31, culm length was 89~110 cm, spike number per $m^2$ was 837~1242, 1000-kernel weight was 34.9~43.2g, and yield was 499~726 kg/10a. Wheat-rye translocation lines showed late maturity and taller culm length than Korean recommended wheat cultivars. Winter hardiness of wheat-rye translocation lines was similar to that of Uri, check cultivar, and KD1-16-04DP01 showed similar ratio of pre-harvest sprouting (PHS) damage to Uri, resistant to PHS. Wheat-rye translocation wheat lines showed resistant to powdery mildew, in spite of Korean wheat cultivars were susceptible to powdery mildew. In flour characteristics, flour yield was 60.0~67.1%, protein content was 7.1~10.5%, SDS sedimentation volume was 15.5~52.0 ml. Flour color was 90.01~92.56 in L*, -1.02~-1.53 in a* and 7.34~12.56 in b*. In texture properties of cooked noodles, hardness of cooked white salted noodles prepared from wheat-rye translocation lines was 3.4~5.5 N, springiness was 0.83~0.90%, cohesiveness was 0.57~0.62%.

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## D-D4-06

# Investigation of the correlation among characters related to storage during storing brown rice.

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This study was carried out to investigate the correlation among lipoxygenase activity, fat acidity and germination rate during storing brown rices at room temperature(RT) and cool temperature(below 15℃). There were high significances among varieties in those storage-related characters of brown rice at all storage periods investigated.

Lipoxygenase activity and fat acidity were increased with the storage duration, while the degrees of increasing rates were lower at cool temperature storage than RT storage. The correlation coefficients between fat acidity and other storage-related characters were highly significant in both storage temperatures of cool and RT.

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