

Correlation between Quantitative Agronomical Traits of Wheat (*Triticum sp.*) Genetic Resources

**Miae Oh, Yumi Choi, Hyemyeong Yoon, Myung-Chul Lee, Kebede Taye Desta,
Sejong Oh, Seong-Hoon Kim, Do Yoon Hyun, Jung-Ro Lee and Myoung-Jae Shin***
National Agrobiodiversity Center, National Institute of Agricultural Sciences, RDA, Jeonju 54874,
Korea

Assessment of plant genetic resources is applicable when breeding improved plant cultivars. In Korea, early maturing wheat germplasm is anticipated for wheat-rice double-cropping. In this study, we assessed five agronomical traits including days of heading after sowing(HD), days of maturity after sowing(MD), culm length(CL), ear length(EL), and thousand grain weight(TW) of 500 wheat germplasms collected from 10 different countries (Mexico, the United States, Afghanistan, Ethiopia, India, Japan, China, Turkey, Pakistan and Portugal), and grown in Korea. Besides, the correlation between the agronomical traits was analyzed using XLSTAT software version 2019 (Addinsoft, NY, USA). The result showed wide-ranging maturity period. Among the entire population, 2 accessions (K256306/JPN/breeding line and K256328/JPN/breeding line) that matured early were identified. Furthermore, HD showed strong correlation with MD ($r=0.684$) and CL ($r=0.610$), and weak correlation with the rest two agronomical traits (EL and TW). Overall, the results of our study provides wide spectrum of prospects, and could be applicable to breed new wheat varieties with early maturity.

Key words: Wheat, Early maturity, Agronomical traits, Correlation

[This study was supported by the Rural Development Administration (project number: PJ01204001).]

*(Corresponding author) E-mail: smj1204@korea.kr, Tel: +82-63-238-4891