

Correlations among Their Characteristics and Determination of Some Morphological Characteristics of Perennial Ryegrass Genotypes

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Abstract : This study aimed to determine some plant characteristics of perennial ryegrass (*Lolium perenne* L.) genotypes collected from the natural flora of Ankara and correlations between these characteristics. In order to evaluate for breeding purposes according to Turkey's environmental conditions, perennial ryegrass plants collected from natural pasture of Ankara at 2004 were utilized. The collected seeds of plants were sown in pots and seedlings were prepared in greenhouse. Seedlings were transplanted to the experimental field at 50x50 cm intervals in Randomized Complete Blocks Design in 2005. Data were obtained from the observations and measurements of 568 perennial ryegrasses in 2007 and 2008. Perennial ryegrass plants' in the spring re-growth time, color, density, growth habit, tendency to inflorescences, time of inflorescence, plant height, length of upper internode, spike length, leaf length, leaf width, leaf area, leaf shape, number of spikelets per spike, seed yield per spike, and 1000 grain weight were investigated and correlation analyses were made on the data. Correlation coefficients were estimated between all paired combinations of the traits. The yield components exhibited varying trends of association among themselves. Seed yield per spike showed significant and positive association with number of spikelets per spike, 1000 grain weight, plant height, length of upper internode, spike length, leaf length, leaf width, leaf area and color, but significant and negative association with growth habit and in the spring re-growth time spring.

Keywords : correlation, morphological traits, *Lolium perenne*

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