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## Improving new genotype with yellow color for bulgur versus yellowing in the bulgur

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Bulgur is generally produced from durum wheat and used as pilaw. The importance of bulgur in terms of human nutrition is better understood with each passing day and there is a serious trend in favor of bulgur in Middle-east, Europe and America. For bulgur, the most important quality trait is yellow color. So, artificial yellowing *via* chemical has been done to obtain bulgur with color yellow by industry. But, this process affects human health negatively. For this reason, it is very important to develop new varieties with natural yellow color and to obtain high quality products for consumer. This study was conducted to determine bulgur yellow colors of some durum wheat genotypes, which are 15 cultivars, 15 landraces and 25 advanced lines and to get relations between traits. In the research, bulgur surface image analyses (BSIA), CIE L\* (Brightness), CIE a\* (Redness), CIE b\* (Yellow Color) and CIE YI (Yellow Indeks) color analyses were investigated. Result of the study came that Pitagora, Zühre, Zenit, Giberunda, Sogol acırlı, G3, G11, G12 and G16 genotypes can be used for end product bulgur in terms of yellow color. According to the biplot graphics three different groups were formed, in which CIE L\* and CIE a\* formed the first and second groups, CIE b\* and CIE YI formed the third group. The traits, which located in same group, related to each other. The trait vectors partaking at the opposite direction are inversely related to each other as CIE L\* and CIE a\*. Also, it has been detected an important positive relation between BSIA and CIE L\*. In this study, although there isn't yellowing process in the bulgur production, the CIE L\* and CIE b\* values are obtained at the level of the bulgur applied with yellowing and it has been shown that yellowing is not necessary in case of using genotypes with high yellow color values.

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