

ABSTRACT**DETERMINATION OF PHYSIOLOGICAL TRAITS FOR GROWTH ANALYSIS in SOME BREAD WHEAT (*Triticum aestivum* L.) CULTIVARS**

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This study has been carried out to determine the agronomic characters and growth parameters of common commercial wheat cultivars in Meander Valley of Aegean Region. Trial was conducted in the experimental field of Adnan Menderes Agricultural Research Institute in 2008-2009 growing season using Randomized Complete Blocks Design with 4 replications.

The measurement characteristics were grain yield, biological yield, harvest index, spike number per square meter, plant height, spike length, the number of grain per spike, the number of spikelet per spike and 1000 grain weight as agronomical traits. Furthermore, dry matter, leaf area index (LAI), leaf area ratio (LAR), canopy temperature depression (CTD), normalized difference vegetation index (NDVI), and stay green trait (SG) at different growth stages were evaluated.

In terms of the number of spikelet per spike, the number of grain per spike, spike length, plant height, and biological yield there were significant differences among the cultivars. Wheat cultivars, Adana 99, Pamukova 97 and Sagittario, had the highest grain yield. From 116 days after sowing to every stage of the growing period, Golia and Adana 99 cultivars had significantly high values. Cultivars reached the highest leaf area index between 120.- 130. days and Adana 99 and Sagittario cultivars had the highest values at each stage of the growing period.

Key words: *Triticum aestivum* L., growth parameters, yield components, yield.