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COMPARISON OF CHLOROPHYLL AND FLAVONOID CONTENT IN AMBIENT AND ELEVATED CO_2 IN 12 DURUM WHEAT GENOTYPES UNDER FIELD CONDITIONS

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The effect of elevated CO_2 on chlorophyll and flavonoid content in durum wheat was studied in a two year FACE (Free Air Carbon Dioxide Enrichment) experiment. Twelve durum wheat genotypes were grown under ambient (400 ppm) and FACE (560 ppm) conditions, and the index values for chlorophyll and flavonoid content as well as a Nitrogen Balance Index (NBI) which is the ratio chlorophyll/ flavonoid, were determined several times during the growing season with a non-destructive optical instrument (Dualex, Force A). No major treatment effects on chlorophyll content were detected while the flavonoids tended to increase under elevated CO_2. A high level of genetic variability was found within the analysed germplasm.

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