

## **EFFECTS OF GA<sub>3</sub> TREATMENTS ON SOME CHEMICAL PROPERTIES OF “AMIGA” AND “FESTIVAL” STRAWBERRY CULTIVARS**

**Mehmet POLAT<sup>1</sup>, Volkan OKATAN<sup>2</sup>, Sultan Filiz GÜÇLÜ<sup>3</sup>, Ayşen Melda ÇOLAK<sup>4</sup>, Nazan KORKMAZ<sup>5</sup>, Mehmet Atilla AŞKIN<sup>1</sup>**

e-mail: mehmetpolat@sdu.edu.tr

---

### **Abstract**

In the last years, interest in research on polyphenol-rich fruit species has increased due to the potential health benefits of these species, mainly attributed to their high anthocyanin content. This study was conducted to determination of GA<sub>3</sub> treatment effects on some chemical properties of “Amiga” and “Festival” Strawberry cultivars. In this research 25, 50 and 75 ppm GA<sub>3</sub> were applied. Strawberry fruits were harvested at the same maturity stage during the same growing season and the total phenolic, total anthocyanin and ascorbic acid content were determined. It (25, 50 and 75 ppm GA<sub>3</sub> treatments) was compared according to their total phenolic (Folin-Ciocalteu method) and total anthocyanin (pH differential method) and ascorbic acid contents. Total phenolic of “Amiga” strawberry cultivar was varied between 474.97 (mg GAE 100g<sup>-1</sup> FW) to 1028.38 (mg GAE 100g<sup>-1</sup> FW). Total anthocyanin of “Amiga” strawberry cultivar and ascorbic acid were varied between 105.58 (μg/g) to 219.29 (μg/g) and 17.97 (mg/100 g) to 134.54 (mg/100 g) respectively. Total phenolic of “Festival” strawberry cultivar was varied between 896.85 (mg GAE 100g<sup>-1</sup> FW) to 1194.82 (mg GAE 100g<sup>-1</sup> FW). And total anthocyanin of “Festival” strawberry cultivar was varied between 37.41 (μg/g) to 113.39. (μg/g). Ascorbic acid contents were determined about 118.88 (mg/100 g) to 172.05 (mg/100 g) in festival strawberry cultivar. Highest value of total anthocyanin and ascorbic acid were obtained from 50 ppm treatment for two varieties. According to results “50 ppm GA<sub>3</sub>” treatment was suggested.

**Key words:** phenolic, anthocyanin, ascorbic acid, strawberry

---