

RESPONSE OF BIOCHEMICAL ACTIVITY OF *HELIANTHUS ANNUUS* L. CV.PAC – 36 TO SULPHUR DIOXIDE

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Abstract: Sulphur dioxide(SO₂) has been studied more extensively than any other pollutant as it is one of the most dominant primary air pollutants in the atmosphere. Some of the environmental effects of SO₂ include acidification of soils, lakes and rivers on one hand and injuries and devastating damage to vegetation under natural and controlled conditions on the other. Its acute and chronic exposure results in the general disruption of metabolic and fundamental cellular processes. The sensitivity of an oil-yielding cultivar of sunflower (*Helianthus annuus* L.cv.PAC-36) to SO₂ pollution had been observed using 2612, 3265, 3918 and 4571µg m⁻³ of SO₂ on 30,50,70 and 90d old plants. Analysis of plant samples collected showed that photosynthetic pigments (chlorophyll a, b and carotenoids) were degraded and leaf extract pH and ascorbic acid content declined in SO₂ treated plants. However, the higher concentration of SO₂ proved more toxic as against the lower concentrations.

Keywords: Ascorbic acid, chlorophyll, *Helianthus*, pollutant, sulphur dioxide

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