

## **Salinity triggers proline synthesis in peanut leaves**

### **ABSTRACT**

To investigate the magnitude of proline accumulation under different salinity levels, a salinity-imposed experiment was conducted. The peanut seedlings were cultured hydroponically for 7 days before imposing salinity and then grown further for another 7 days under salinity-loaded condition. Results showed that shoot dry matter, relative water content, chlorophyll and K<sup>+</sup> decreased significantly with increasing salinity. In contrast, Na<sup>+</sup>, hydrogen peroxide and proline increased with increasing salinity level. Free proline content increased abruptly at medium and high salinity levels. Interestingly, the lowest level of dry matter (an indicator of tolerance/sensitivity) accompanied by the highest accumulation of proline at 200 mM NaCl puts a question mark on the well-documented role of proline in relation to salinity tolerance. The underlying mechanism is discussed in detail in the current study.

**Keyword:** Salinity; Proline biosynthesis; Peanut leaves