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## **Screening and Identification of Salt Tolerant Peanut (*Arachis hypogaea L.*) Genotypes under Salinity Stress**

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### **[Abstract]**

Salinity in surface waters is increasing around the world. Many factors, including increased water extraction, poor irrigation management, and sea-level rise, contribute to this change, and posing a threat to plant development and agricultural production. Seeds exposed to high salinity, have a lower probability of germinating and various physiological and biochemical effects. Salinity stress affects more than 20% of agricultural land and about 50% of irrigated land. In the current study, our objective is to identify the salt-tolerant peanut (*Arachis hypogaea L.*) Korean genotypes under salinity stress. Thus, two-week-old 19 diverse peanut Korean genotypes were exposed to 10 days of salinity (150 mM NaCl) stress. Based on the growth attributes investigation, Baekjung and Ahwon genotypes showed significantly higher shoot lengths compared to control plants. Whereas, the Sinpalwang genotype exhibited a significantly positive response for plant growth and reduced wilting symptoms compared to other genotypes. This study was able to find out peanut tolerant and sensitive genotypes for salt stress. These results may provide a good template for further salt-tolerant peanut cultivar improvement programs. Identified diverse salt-responsive genotypes can be utilized as source material in Korean breeding schemes for peanut crop improvement for salt and other abiotic stress tolerance.

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