**SAMPLE TEMPLATE**

**Exploring Climate-Smart Rice Varieties for Sustainable Agriculture in Salinity-Prone Regions**

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Climate change and its associated effects, such as rising soil salinity and irregular rainfall, pose significant challenges to rice cultivation, particularly in coastal and delta regions. This study evaluates the performance of climate-smart rice varieties under salinity stress conditions in affected regions. A set of 50 rice genotypes were tested in multi-location trials under varying levels of salinity stress, using a combination of phenotypic assessments and genomic selection approaches. Key agronomic traits, including yield, biomass, and salt tolerance, were measured, and significant genotypic differences were observed across the trials. The results indicated that select varieties demonstrated exceptional tolerance to salinity stress, maintaining stable yields even under severe conditions. These varieties are recommended for scaling out in salinity-prone regions, potentially improving food security and farmers’ resilience to climate risks. Future research will focus on integrating molecular breeding techniques to further enhance the adaptive capacity of rice varieties to salinity and other abiotic stresses.

**Keywords:** *climate-smart varieties, salinity tolerance, rice, genomic selection, stress adaptation*

**Selected Theme:**

**Preferred mode of presentation:**