

FUH MICHAEL APOLONIUS

Effects of Iron-toxic Conditions on Contrasting Rice Genotypes at the Reproductive Growth Stages

Keywords: Chronic stress, flooded soils, Iron toxicity, *Oryza sativa*, Pulse stress

This Master's research project investigates the response of contrasting rice genotypes under different conditions of iron toxicity during the reproductive phase.

Rice genotypes respond differently to different levels of iron stress. Iron, being an essential element in plant metabolism may either promote or inhibit growth and yields, depending on its concentration in soil solutions.

Most studies till date have either centered just on the early growth stages of rice or have been limited to hydroponics and green house conditions. Furthermore, some varieties described as tolerant in some areas have been shown to be susceptible in other areas and vice versa.

The study thus seeks to compare 20 representative genotypes under field conditions with 1) Chronic stress and 2) Pulse stress regarding symptom score, plant height, sequential height, yield and yield parameters. This will assist in the understanding of acceptable levels of iron in the soil and resistant varieties which can cope under toxic conditions.



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