Journal of New Seeds ›

Volume 9, 2008 - Issue 2

Original Articles

Seed Priming with Polyamines Improves the Germination and Early Seedling Growth in Fine Rice

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Pages 145-155 | Published online: 11 Oct 2008

Cite this article https://doi.org/10.1080/15228860802087297

ABSTRACT

Pre-sowing polyamine seed treatments were employed in fine rice (Oryza sativa) to explore the possibility of improving germination and early seedling growth. Fine rice (cv. Super-basmati) seeds were soaked in 10 and 20 ppm aerated solutions of spermidine, putrescine and spermine for 48-h at 28 ± 2 C. Polyamine seed treatments resulted in earlier, synchronized and enhanced germination. Improvement in shoot and root length, seedling fresh and dry weight, and root and leaf score, was also observed in seeds treated with polyamines. Seed treatment with 10 ppm putrescine solution was the most effective for most of the attributes studied.

KEYWORDS:

Basmati | fine rice | germination | polyamine | seedling growth

Acknowledgements

The authors acknowledge the Higher Education Commission, Government of Pakistan, for financial support of the present studies.

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