



RESEARCH PAPER

Standardization of *Azospirillum* concentration and duration of biopriming for rice seed vigour improvement

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Abstract : *Azospirillum lipoferum* is nitrogen fixing biofertilizer which can be used in seed treatment for improving seedling vigour. In order to standardize the optimum concentration of liquid *Azospirillum* for rice biopriming seed treatment and duration of biopriming, a laboratory experiment was conducted in Department of Seed Science and Technology, Tamil Nadu Agricultural University, Coimbatore in Completely Randomized Design with four replicates. Rice hybrid CORH 4 and its parental lines COMS 23A and CB 174R seeds were bioprimed separately with 10, 15 and 20 per cent of *Azospirillum* for 6, 12, 18 and 24h of durations. Unprimed and hydroprimed seeds were used as control. The result revealed that rice seeds bioprimed with 20 per cent *Azospirillum* for 12 h was found to be the best seed biopriming treatment for both CORH 4 rice hybrid and its parental lines to enhance the germination rate, total germination percentage, seedling growth and vigour. In rice hybrid CORH 4, biopriming with 20 per cent liquid *Azospirillum* for 12h expressed an increase of 14 per cent of vigour index over the non-primed control seeds.

Key Words : *Azospirillum lipoferum*, Biopriming, Seed germination, Seedling vigour

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