

Novel Membrane Lipid Nanoemulsion of *Trichoderma* spp. for Inducing Downy Mildew Disease Resistance in Pearl Millet

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Abstract:

Nanoemulsion was formulated from membrane lipids of *Trichoderma* spp. with non-ionic surfactant Tween 80 by ultrasonic emulsification method. Nanoemulsion with droplet diameter of 5-51 nm was obtained. The possible effects of membrane lipid nanoemulsion on pearl millet seed growth parameters and elicitation of downy mildew disease resistance in pearl millet was analyzed to develop an eco-friendly disease management strategy. Seed priming with nanoemulsions illustrates significant protection and elevated levels of early defense gene expression. The results suggested that protection offered by formulated nanoemulsion is systemic in nature and durable.




