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(86) International Application No :NA		Name of Applicant : NA	
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(87) International Publication No : NA		(72)Name of Inventor :	
(61) Patent of Addition to Application Number :NA		1)Dr. Kamlesh Choure	
Filing Date :NA		Address of Applicant :Professor & Head, Department of Biotechnology, AKS University, Sherganj, Panna Road, Satna (MP)-485001 -----	
(62) Divisional to Application Number :NA		2)Dr. Monika Soni	
Filing Date :NA		Address of Applicant :Assistant Professor, Department of Biotechnology, AKS University, Sherganj, Panna Road, Satna (MP)-485001 -----	
		3)Dr. Samit Kumar	
		Address of Applicant :Associate Professor, Department of Chemistry, AKS University, Sherganj, Panna Road, Satna -----	
		4)Mr. Anant Kumar Soni	
		Address of Applicant :Pro Chancellor, AKS University, Madhya Pradesh, India -----	

(57) Abstract :
The present invention comprises development of nano-bioformulation of microbial consortium to enhance the shelf-life of liquid biofertilizer and retained its quality during longer storage period. Further invention relates to bacterial species isolated from chickpea rhizosphere and the development of novel nano-bioformulation for liquid biofertilizers contains microbial consortium (Pseudomonas aeruginosa & Rhizobium tarimense) using nano-cellulose with cell-protectants. Another invention relates to nanocellulose encapsulates the bacterial cells that protects it from desiccation and provides the safe environment to encapsulated cells for viability under nutrient stress conditions. The novel formulation assures the liquid biofertilizers to maintained the higher viable counts of the bacterial cells during longer storage conditions upto 2 years. The novel formulation retained the quality of the biofertilizer during longer storage condition, wherein the analysis of microbial quality at different intervals to zero month to 24 months in terms of viable cell counts and having the enhanced plant growth promoting activities during the longer storage conditions that makes this formulation for high quality biofertilizers after production.

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