

## **Research on effect of structured water on yield and quality of cotton**

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#### Section 3.12: Soil Biology and Biochemistry

The uninoculated control with structured water yielded 3135 kg/ha seed cotton as compared to 2695 kg/ha under bore well irrigated water. Among the bio-inoculants, foliar spraying of PPFM @1% (twice during flowering to boll development) along with seed treatment + soil treatment of azophosmet recorded significantly higher seed cotton yield of 3404 kg/ha under structured water and 3009 kg/ha under bore well water. The uninoculated control recorded significant reduction in seed cotton yield than combined application of seed treatment + soil application and foliar PPFM and was on par with either seed treatment and seed + soil application of azophosmet. The seed cotton yield was enhanced significantly due to structured water (3297 kg/ha as against 2849 kg/ha with bore well) irrigation. The roots of structured water irrigated cotton had higher CEC (20.5 meq/g) the bore well irrigated water (18.12 meq/g). The chlorophyll content was 4.4mg/g of fresh leaf at 60 DAS in structured water cotton as against 3.3 mg/g recorded with bore well water. The plants were also taller (120.5 cm) as against 116.2 cm under bore well irrigation at harvest.