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The investigation of seed water state under the action of cytoskeletal modificators

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Abstract

The water molecular state dynamics under swelling and seed germination after cytoskeletal modificator - colchecin and cytochalasin B - was investigated by nuclear magnetic resonance method. In virtye of spin-spin relaxation times T2 changes conclusion was done about redistribution between free and bound water, which happens at the moment of changing water absorption physical stage to physiologically regulated process. It suppose that the cytoskeletal protein inhibitors can decrease superficial and capillar forces, as a result fraction of free water increase and bound water quantity decrease. The cytoskeletal protein inhibitors show their maximum effect - expressed germination inhibition - under minimum seed humidity at the first stage of swelling.