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Isolation and Characterization of Salt Tolerance Rhizobia from *Acacia* Root Nodules

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Forty strains of *Acacia* rhizobia spp. were isolated from *Acacia* root nodules. Salt tolerance *Acacia* rhizobial strains which can grow at concentration of up to 1.4 M sodium chloride were isolated and characterized. In *Acacia*, both fast-growing and slow-growing rhizobia occur naturally, and fast-growing species are predominant throughout the isolates. The fast-growing *Acacia* rhizobia accumulate intracellular free glutamate in response to salt stress. Fast-growing rhizobial strains showed strong and weak resistance to streptomycin and gentamycin, respectively. By one-dimension SDS- polyacrylamide gel electrophoresis, distinct difference was observed between salt tolerant (fast-growers) and sensitive (slow-growers) strains. One or two large and three small plasmids with molecular weights about 15 kb, 5 kb, and 1.5 kb were isolated from fast-growing strains. This is the first study to report that *Acacia* rhizobia contain small plasmid of nitrogen fixing organism. These plasmids of *Acacia* rhizobia are very useful as genetic engineering tools.