



Soybean cultivars affect nodulation competition of *Bradyrhizobium japonicum* strains

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Summary

The influence of five Thai soybean cultivars on nodulation competitiveness of four *Bradyrhizobium japonicum* strains was investigated. Cultures of *B. japonicum* strains THA5, THA6, USDA110 and SEMIA5019 were mixed with each other prior to inoculating germinated soybean seeds growing in Leonard jars with nitrogen-free nutrient solution. At harvest, nodule occupancy by each strain was determined by a fluorescent antibody technique. The term ‘general competitive ability’ was introduced to describe the average competitive nodule occupancy of a strain in paired co-inoculation with a number of strains on soybean. The nodule occupancies by an individual strain were directly correlated with the proportions of that strain in the inoculum mixtures. USDA110 showed higher nodulation competitiveness than the other strains on three of the five cultivars. The Thai strain THA6 appeared to be more competitive than USDA110 on cultivar SJ5. Thus, nodulation competitiveness of the *B. japonicum* strains was affected by the cultivars of soybean used.