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**Cross inoculating ability of rhizobia from wild non-edible legumes
on *Vigna radiata*, *Vigna mungo* and *Glycine max*.**

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The objectives of this study were to test the rhizobia isolated from 9 wild non-edible legumes for their effect on *Vigna radiata*, *Vigna mungo* and *Glycine max*. by determining the impact of cross inoculation on nodulation and dry matter production of the above host species. Cross inoculation experiments were performed as a pot experiment under semi aseptic conditions with 9 strains which were previously isolated and screened as effective strains from wild non-edible legumes (*Crotalaria* sp., *Mimosa* sp. and *Vigna* wild relatives). Two rhizobial strains obtained from each host crop was also used as reference strains. The treatments were arranged as a complete randomized design with four replicates. Inoculation of rhizobial strains was done 3 days after the seeding stage. Before harvesting, the plants were visually rated. Plants were harvested after 7 weeks and a nodule count was taken. The plants were oven dried at 70 °C for 48 hours and weighed. The data were analyzed statistically (at $p=0.05$) using the SAS statistical package. According to the results of nodule formation all except one strain produced nodules in *V. radiata*. All 9 strains tested formed nodules in *V. mungo*, and all except two strains produced nodules in *G. max*. According to plant dry matter production of *V. radiata*, plants inoculated with 7 of the above strains showed dry matter production which was even higher than that with N fertilizer application (20–31%). When compared to the N-free treatment, the dry matter production was 30-40 % higher. Although the other two strains showed poor dry matter production, they showed higher nodulation, showing low effectiveness and high infectivity. In *V. mungo*, 4 strains showed better performance in response to dry matter production (compared to the N fertilizer application [10-12%] and compared to N free treatment 29-44%). Although one of the above strains resulted in a comparatively low average number of nodules, it exhibited the highest dry matter production showing that it is low in infectivity but high in effectiveness. With respect to *G. max*, 4 strains showed a higher dry matter production than the other strains, which was greater than the N fertilizer application (15-20%). One of these was a strain that also showed a higher nodulation. Therefore, this strain has a high infectivity as well as high effectiveness.

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