

Selection of superior peat-based Bradyrhizobium inoculants for the cultivation of (*Indigofera tinctoria* L.)

ABSTRACT

The pot experiment was conducted to the peat-based Bradyrhizobium inoculants as biofertilizer for cultivation of indigo (*Indigofera tinctoria* L.). Six isolates of Bradyrhizobium of indigo origin (HSTU-IR2, HSTU-IR3, HSTU-IR4, HSTU-IR9, HSTU-IR10 and HSTU-IR14) were collected from the Department of Soil Science, Hajee Mohammad Danesh Science and Technology University (HSTU), Dinajpur, Bangladesh. Peat-based Bradyrhizobium inoculants were prepared with these six isolates and the inoculants were tested for their effects on nodulation, growth and yield of indigo plants through a pot experiment. The results revealed that the isolate HSTU-IR3 recorded the highest number and weight of nodules, more amount of N content in nodules, highest plant shoot and weight. The isolate HSTU-IR4 and HSTU-IR3 produced the tallest plant, largest shoots and roots N content. Based on the overall results two isolates viz. HSTU-IR3 and HSTU-IR4 performed superior to others.

Keyword: Cultivation; Indigo; Peat-based inoculants; Selection