Mass multiplication of arbuscular mycorrhizal fungi associated with some leguminous plants: an ecofriendly approach

Nisha Kadian[1], Kuldeep Yadav[2] & Ashok Aggarwal[1]*
[1]Department of Botany, Kurukshetra University, Haryana-136 119, India

Received 17 March 2016; revised 26 January 2018

Plant microbe interactions are interesting events that contribute to sustainable agriculture. The arbuscular mycorrhizal (AM) fungi enjoy a mutualistic association between the roots of most plant species and serve as the most common type of biofertilizer. However, production of inoculums is one of the hindrances in the large-scale production of AM fungi. In this context, a pot experiment was performed under polyhouse conditions, to evaluate the effect of chickpea husk as substrate with jowar (*Sorghum bicolor*), barley (*Hordeum vulgare*) and wheat (*Triticum aestivum*) as different host plant on mass multiplication of dominant AM fungi. The results revealed that AM fungal multiplication was significantly influenced by the presence of different concentrations of substrate and different type of the host plants used. Among the different hosts, sorghum showed prominent results pertaining to maximum inoculum production of *G. mosseae*. Spore numbers tend to increase with period of growth and increase in size of the host plants. Thus, the present study might be highly significant as it suggests an economical as well as eco-friendly species specific highly effective inoculum.

Keywords: *Acaulospora laevis*, AM fungi, Chickpea seed husk, *Glomus mosseae*, Mass multiplication