

EFFECT OF DIFFERENT FOLIAR BIOFERTILIZERS APPLICATION ON SESBANIA IN GREENHOUSE CONDITION IN SHAZAND (MARKAZI PROVINCE)Fatemeh Maleki¹, M.R. Davari², Siavash Aghakhani² & H. Hadianpour³¹: Ehyagarane Tabiat NGO, Shazand, Iran²: Department of Agriculture, Payame Noor University, IR of Iran³: Jahade Agriculture of Shazand, Shazand, Iran*fmaleki1990@yahoo.com*

The exact origin of *Sesbania rostrata* is not known but it is considered native to many South East Asian countries (Burbidge 1965). *Sesbania* is well adapted to hot, humid environments and it does not grow well in the subtropics particularly in areas with cool season minimum temperatures below about 10°C (Wood and Larkens 1987). It grows well in the subtropics and is significant in extending the nitrogen fixing forage trees into cooler, higher elevation regions of the tropics up to 2,000 m. Annual *Sesbania* species such as *S. cannabina*, *S. rostrata* and *S. bispinosa* are widely used in Asia as green manures in paddy rice cultivation because of their ability to withstand waterlogging. *Sesbania* is used to a lesser extent in this context but probably because it is not as fast growing as the annual species. Onim *et al.* (1987) speculated that the perennial *Sesbania* species could fix up to 600 kg N/ha/year. The yield potential of the perennial *Sesbania* species has been evaluated under a range of cultural practices throughout their area of use. Soil type, climate and management practices such as fertilizer use, height and interval of cutting as well as inter-cropping all affect yield. The period of between two crop cultivation (July- October) is suitable for sowing this plant as green manure in greenhouses in tropical climate such as Sareband region (Shazand). All the biofertilizers made by farmer according IFOAM standards in farm condition. The field experiments were carried out as an on-farm research on a greenhouse located in Shazand, Markazi province during crop cycles of 2013. The experiment was laid out in a randomized complete block design with three replications. Treatments consisted three combinations of different biofertilizers [vermiwash (V), enriched vermiwash with effective microorganisms (EM), aloe vera and nettle extract (EV), bioferment (B)] and control (no foliar fertilizer applied). Application of “vermiwash + EM+ aloe vera and nettle extract” was most productive in respect of dry matter and had significantly higher nitrogen content than other treatments. The results of the experiment indicated that spray the mixture biofertilizers and herbal extract can obtain suitable yield for use as a green manure in the greenhouse or a raw material in the composting and vermicomposting bed in Markazi province condition.

Keywords: aloe vera, bioferment, effective microorganisms, nettle, vermiwash.

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