

Research
Paper

Growth and yield of safed musli (*Chlorophytum borivillianum*, Santapau and Fernandes) as influenced by bulky and concentrated organic manures grown under loamy sand soil

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ABSTRACT

An investigation was carried out on loamy sand soil during *Kharif* season of the year 2008-09 to study the effect of bulky and concentrated organic manures on growth and yield of Safed musli (*Chlorophytum borivillianum*) at Anand, Gujarat. The experiment consisted of eleven treatments. The maximum number of fasciculated roots per plant were found with the application of vermicompost @ 2 t/ha along with seed treatment of *Azotobactor*. Significantly higher fasciculated root length (10.3 cm) and girth (3.6 cm) was also observed under the same treatment. Application of vermicompost @ 2 t/ha along with *Azotobactor* recorded significantly higher fasciculated root yield (4444 kg/ha) which was at par with application of castor cake @ 1 t/ha along with *Azotobactor*, application of neem cake @ 750 kg/ha along with *Azotobactor* and application of castor cake @ 1 t/ha alone. Significantly the highest sapogenine content (1.494 %) was noticed in the application of vermicompost @ 2 t/ha along with root treatment of *Azotobactor* to fasciculated roots at the time of planting.

Gaikwad, V.P., Bhosale, N.D., Patel, D.H., Patel, R.B. and Chaudhari, N.J. (2011). Growth and yield of safed musli (*Chlorophytum borivillianum*, Santapau and Fernandes) as influenced by bulky and concentrated organic manures grown under loamy sand soil. *Adv. Res. J. Crop Improv.*, 2 (1) : 135-137.

Key words : Safed musli, Bulky organic manures, Concentrated organic manures, Sapogenine

INTRODUCTION

Safed musli (*Chlorophytum borivillianum*) is an important medicinal plant which belongs to Liliaceae family. It is widely distributed in India, particular in valley of Himalaya, Satpuda, Arvali and in hilly areas of the Bihar, Assam and founded in the parts of Rajasthan, Gujarat and Maharashtra. Fasciculated roots of Safed musli have economic importance. The roots of this herb have great medicinal value due to presence of the saponin content (2.17 %). It is the rich source of alkaloids, vitamins, proteins, carbohydrates, steroids, saponins, potassium, calcium, magnesium, phenol, resins and polysaccharides. In structure, the Sapogenine consist of sugar with sapogenine, the latter being the physiologically active portion of molecule. The right proportions of saponins and alkaloids component present in Safed musli

make a rich curative herb. It is considered as a wonder drug in the Indian system of medicine due to its aphrodisiac and natural sex tonic properties.

Traditionally safed musli grown in forest and is collected as one of the forest products by tribals. They sold it to private contractor and businessman on throw price. Recent research advances in commercialization of certain forest product has great awareness and interest amongst tribal. Safed musli is one of the products that have potentiality due to its immense medicinal value because of good market price. Area under Safed musli increasing day by day. Local people having quires about its package of practices, particularly the manure and fertilizers management and, therefore, the present investigation was carried out to study the effect of bulky and concentrated organic manures on yield and quality of safed musli.