OTHERS (incl. Cultivation, Distribution, New species, Postharvest Technologies, Packaging Technology, New technologies/Know How Developed, Book reviews, Forthcoming events)

CULTIVATION

NPARR 3(3), 2012-0332, Effect of supplementing compost with grapeseed meal on *Agaricus bisporus* production

This work assesses the agronomic performance of grapeseed meal, before and after oil extraction, in nutritional compost supplement when growing the mushroom species *Agaricus bisporus* (Lange) Imbach. The effect of formaldehyde treatment before using this compost is also considered. Materials were applied at different doses at spawning. Along with non-supplemented compost, three commercial nutritional supplements were used as controls. In general terms, grapeseed meal performance was similar to that of commercial delayed-release nutrients, but improved the non-supplemented compost response. We highlight that grapeseed enhances performance as larger yields of harvested mushrooms were obtained with greater dry weight content; however, their protein content was lower. The best performance was displayed by fresh formaldehyde-treated grapeseed (6000 ppm) when applied to the 10 g kg$^{-1}$ compost dose. The findings suggest that grapeseed meal offers a great potential to be applied on a commercial scale. The addition of grapeseed resulted in an enhanced performance as shown by the higher number of harvested mushrooms. The use of grapeseed meal (extracted or non-extracted), a low-cost ingredient with high levels of carbohydrates, may suppose an economic profit on the basis of the positive effect of adding carbon in the mushroom cultivation [Arturo Pardo-Giménez, Diego C Zied, Manuel Álvarez-Ortí, Manuela Rubio and Jose E Pardo* (Escuela Técnica Superior de Ingenieros Agrónomos, Universidad de Castilla-La Mancha, Campus Universitario, s/n 02071, Albacete, Spain), *Journal of the Science of Food and Agriculture*, 2012, 92(8), 1665-1671].

NPARR 3(3), 2012-0333, Effect of NaCl salinity on the growth and mineral nutrition of one month old *Prosopis juliflora* (Sw.) DC. seedlings

The effect of NaCl salinity on the growth and mineral nutrition of one month old *Prosopis juliflora* seedlings was studied with the help of sand culture experiment. The seedlings were treated with 100, 200 and 300 mM NaCl concentrations, respectively. It was found that there was stimulation in plant growth at low concentrations of salt while at higher concentrations it was hampered causing a marked decrease in the fresh (60%) and dry weight (80%). The level of sodium, chloride and calcium was found to increase in the roots as well as leaves with increasing levels of salinity in the rooting medium. The level of potassium and phosphorus however, was found to decrease in the leaves and roots of seedlings grown under NaCl stress [Amol V. Patil and Baburao A. Karadge (Department of Botany, Shivaji University, Kolhapur (MS) India 416 004), *Pharmacognosy Journal*, 2012, 4(31), 63-66].

NPARR 3(3), 2012-0334, Assessing the benefits of Azotobacter bacterization in Sugarcane: A Field appraisal

Biofertilizers have long been assessed as powerful technology to obtain sustainable enhanced crop production. The present investigation revealed the positive effects of inoculation of Azotobacter biofertilizer on growth and yield parameters in sugarcane var. CoJ 83 under field conditions. Application of *Azotobacter* biofertilizer at both the nitrogen levels (N75% Rec and N100% Rec levels) resulted in significant increase in the cane yield over the respective controls. Maximum increase in cane yield was recorded by *Azotobacter* inoculation at recommended dose of
nitrogen. Inoculation with Azotobacter at N75% Rec level of N fertilizer resulted in cane yield that was observed to be statistically at par with N100% Rec level. The application of this biofertilizer would not only be beneficial keeping in view the phenomenon of enhanced productivity using environmentally benign technology, but also would be useful to obtain better yield with improvement of the soil microbial ecology/soil food web [Satwant Kaur Gosal*, Anu Kalia, Satinder K. Uppal, Rajinder Kumar, Sohan Singh Walia, Kuldeep Singh and Harpal Singh (Department of Microbiology, Punjab Agricultural University, Ludhiana, Punjab 141004, India), Sugar Tech, 2012, 14(1), 61-67].

NPARR 3(3), 2012-0335, Intercropping medicinal plants in black pepper

Different intercropping composing several medicinal plants in black pepper was studied. Black pepper var. Panniyar-1 planted with Asparagus gave maximum yield (1998 kg/ha) followed by Alpinia (1,700 kg/ha). Highest income was obtained with Crysopogon intercropping (B: C ratio = 2:3:1) [Thankamani C.K*, Kandiannan K. and Hamza S. (Indian Institute of Spices Research, Kozhikode - 673 012, Kerala), Indian Journal of Horticulture, 2012, 69(1), 133–135].

NPARR 3(3), 2012-0336, Effect of supplementing compost with grapeseed meal on Agaricus bisporus production

This work assesses the agronomic performance of grapeseed meal, before and after oil extraction, in nutritional compost supplement when growing the mushroom species Agaricus bisporus (Lange) Imbach. The effect of formaldehyde treatment before using this compost is also considered. Materials were applied at different doses at spawning. Along with non-supplemented compost, three commercial nutritional supplements were used as controls. In general terms, grapeseed meal performance was similar to that of commercial delayed-release nutrients, but improved the non-supplemented compost response. It is highlighted grapeseed enhances performance as larger yields of harvested mushrooms were obtained with greater dry weight content; however, their protein content was lower. The best performance was displayed by fresh formaldehyde-treated grapeseed (6000 ppm) when applied to the 10 g kg$^{-1}$ compost dose. It is suggested that grapeseed meal offers a great potential to be applied on a commercial scale. The addition of grapeseed resulted in an enhanced performance as shown by the higher number of harvested mushrooms. The use of grapeseed meal (extracted or non-extracted), a low-cost ingredient with high levels of carbohydrates, may suppose an economic profit on the basis of the positive effect of adding carbon in the mushroom cultivation [Arturo Pardo-Giménez, Diego C Zied, Manuel Álvarez-Ortí, Manuela Rubio, Jose E Pardo* (Escuela Técnica Superior de Ingenieros Agrónomos, Universidad de Castilla-La Mancha, Campus Universitario, s/n 02071, Albacete, Spain), Journal of the Science of Food and Agriculture, 2012, 92(8), 1665-1671].

NPARR 3(3), 2012-0337, Performance feasibility and economic viability of sugarcane planter in western plane zone of Uttar Pradesh, India

Sugarcane is a major commercial crop consuming more labour force for planting. Sugarcane planting is a time consuming and labour intensive operation in sugarcane cultivation. In the traditional method in India, all the sugarcane cultivation processes are carried out by manual labour except land preparation. Sugarcane planting requires manual power and a pair of bullock or a tractor with ridger to plant sugarcane setts in one hectare on an average. Although number of useful machines have been designed, developed and being manufactured for cultivating sugarcane, but due to lack of extension and socioeconomic reasons, still majority of the farmers are using indigenous tools and equipments. Shortage of timely labour
availability and exorbitant wages compel our farmers to limit their acreage under sugarcane crop. Therefore there is an urgent need to mechanize sugarcane planting operations for reducing the cost of planting, as well as, for reducing the human drudgery involved. The field trials of Khalsa make three row automatic sugarcane planter was conducted for planting of sugarcane at farmers’ field as well as at research farm. The performance indicators of the planter, viz. field capacity, efficiency etc. were calculated. The effective field capacity was 0.38 ha/h with field efficiency up to 70.4% [Sanjay Kumar and B. R. Singh (Department of Agricultural Engineering and Food Tech, SVPUA&T, Meerut, Uttar Pradesh, India), *Sugar Tech*, 2012, 14(2), 101-108].

*NPARR* 3(3), 2012-0338, **Wider row spacing in sugarcane: A Socio-economic performance analysis**

This article deals with the various sociological and economical issues concerned with wider row (150 cm) spaced planting in sugarcane. The study was conducted in Sakthi Sugars Ltd. Tamil Nadu state of South India during 2007–2009. Farmers realized increased net returns through improved cane productivity of 20-30 t/ha apart from the economic benefit of growing intercrops. Wide row planting also facilitated mechanization and reduced cost of cultivation. In spite of the constraint of small land holdings, all the farmers favoured the continued adoption of this technology. The study helps to get a better understanding of the performance of wider row spacing in farmer’s fields and their apprehensions of this fast spreading technology in South India [T. Rajula Shanthy and G. R. Muthusamy (Extension Section, Sugarcane Breeding Institute, Coimbatore 641 007, India), *Sugar Tech*, 2012, 14(2), 126-133].