



Studies on potting media in growth and development of wheat grass (*Triticum* spp.)

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ABSTRACT

Wheat grass is of immense nutraceutical value as it is rich in vitamins, minerals and amino acids. Besides the medicinal importance of wheat grass availability of superior varieties adds to the advantages. However information on different potting media to hasten germination is lacking. Hence, an experiment was carried out to study the potting media as well as superior wheat varieties on growth and development at Department of Horticulture, University of Agricultural Sciences, Bangalore. Observations on growth and yield parameters were recorded at different intervals. Significantly high germination was recorded in the media M_3 (87%). Among the media, significant plant height was recorded at 5th, 7th and 10th days after sowing in M_3 (10.14 cm, 11.35 cm and 13.13 cm, respectively). Media and varietal interaction revealed that maximum plant height was in M_3V_7 at 5th, 7th, and 10th DAS (12.27 cm, 13.32 cm and 15.05 cm, respectively). On fresh and dry weight basis the maximum yield was recorded in V_3 (118.50g, 13.99g, respectively). While in case of media M_3 (122.53g and 14.34g,) recorded maximum fresh and dry weight of wheat grass, respectively. In media and varietal interaction maximum fresh and dry weight of wheat grass was recorded in M_3V_3 (149.29g, 16.87g, respectively). Among the different growing media and varieties, cocopeat (M_3) and DWR-185 (V_3) were found to be superior over other treatments.

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Wheat grass is a complete protein containing over 20 essential and non-essential amino acids. It contains twice as much vitamin- A (Beta-Carotene) than carrots, all the B vitamins including the elusive B-12, more vitamin-C than oranges, vitamin E, and vitamin K. It is rich source of minerals especially high in calcium, magnesium, manganese, phosphorus and potassium, as well as trace minerals such as zinc and selenium. The high chlorophyll content of the wheat grass makes it an excellent detoxifier, blood cleanser, strengthens the immune system as well as blood builder (Patil, 1987; Coleman, 1994). It cures cancer, cardiovascular diseases, respiratory diseases like asthma and problems of digestive system like constipation, liver problems, migraine and peritonitis (Gala *et al.*, 1999).

Potting media is an important part of nursery crop production. The potting media or the growth medium should have certain ideal characteristics *viz.*, it should be free of weed seeds and diseases, stable for a long time, and heavy enough to support the plant but at the same

time it should be light enough to facilitate easy handling, available at a low cost with good physical, chemical and biological properties (Chaudhary, 1996). At present, wheat grass is sold commercially in pro trays for public consumption. Whenever, the grass is grown at homes, the variety or the advantages of good propagating media is not at all considered. The general public is not aware of the wheat varieties available for grass production or the suitable media that can become an important aspect of better germination and growth besides being free of microbial load. The study was carried out to evaluate seven available varieties of wheat along with locally available check and different media with special reference to growth and development of wheat grass.

MATERIALS AND METHODS

The present investigation was carried out during December to April 2009-10 at Division of Horticulture, University of Agricultural Sciences, Gandhi Krishi Vignana Kendra, Bengaluru. The experiment was conducted at