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Impact of potting media on growth and quality of indoor foliage plants Aglaonema and Dieffenbachia

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ABSTRACT

An investigation was carried out to study the relative performance of two indoor foliage plants, Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow grown in various media compositions in form of a pot culture trial in the Department of Horticulture, Institute of Agricultural Sciences, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar in an agro shade net house with 70 per cent shade during the period between October 2018 to April 2019. The trial was conducted in form of a Factorial Experiment following Completely Randomized Design with three replications and consisted of two factors viz., potting media and in door foliage plants as treatments. In the present investigation five media compositions viz., M_1(2 parts of garden soil+ 1 part of FYM), M_2 (2 parts of garden soil + 1 part of coarse sand +1 part of FYM), M_3 (2 parts of garden soil +1 part of coco peat), M_4 (2 parts of garden soil +1 part of coarse sand +1 part of coco peat) and M_5 consisting of 2 parts of FYM + 1 part of coco peat were used in which the ingredients were mixed on volume basis. The performances of the two indoor foliage plant species viz., (S_1) Aglaonema and (S_2) Dieffenbachia were evaluated in the above mentioned potting media for various growth and quality parameters. The results of the study revealed that among various combinations of M x S_1, performance of Aglaonema grown in media M_5 composed of 2 parts of FYM + 1 part of coco peat was most satisfactory with respect to almost all parameters. Growth parameter like leaf area and scoring for quality parameters like colour grade and visual plant grade were significantly higher under this treatment combination. Besides, parameter like plant spread also recorded highest value which was at par with either M_2S_1 or M_4S_1 combinations. Performance of Aglaonema (S_1) under M_4 ie.2 parts of garden soil +1 part of coarse sand + 1 part of coco peat (M_4S_1) was next to M_5S_1 which recorded higher values for leaf area, plant spread and stem diameter while parameters like colour grade and visual plant grade was improved under M_2S_1 (ie. Aglaonema grown in 2parts of garden soil +1 part of coarse sand + 1 part of FYM) combination next to M_5S_1. Performance of M_3S_1 combination ie. Aglaonema grown in 2 parts of garden soil + 1 part of coco peat was found unsatisfactory for various parameters which recorded the lowest scoring for visual plant grade and significantly lower score for colour grade. Besides, the performance of M_1S_1 combination ie. Aglaonema grown in 2 parts of garden soil +1 part of FYM wav more less similar with respect to different parameters under study. Various combinations of MxS_2 ie. Dieffenbachia grown in different media compositions followed more or less similar trend as observed in MxS_1 combination. Plants of Dieffenbachia grown in media M_5 (2 parts of FYM + 1 part of coco peat) recorded significantly higher values for plant spread, visual scoring for colour grade and plant grade in addition to maximum basal diameter although this parameter was not significantly influenced . Performance of M_4S_2 combination ie. Dieffenbachia grown in 2 parts of garden soil + 1 part of coarse sand + 1 part of coco peat was also better which recorded highest individual leaf area followed by and at par with M_5S_2. Besides, plant spread, basal stem diameter and scoring for visual plant grade were also improved next to M_5S_2 combination. On the other hand scoring for colour grade was improved

under M_2S_2 next to M_5S_2 combination. Significantly lower plant spread and scoring for colour grade were observed under M_3S_2 combination. Besides, lowest values were also recorded for basal stem diameter and visual grade of plants under this treatment combination. Performance of plants with respect to all the parameters under M_1S_2 combinations was found to be unsatisfactory.

Key words: In door foliage plants, Aglaonema, Dieffenbachia, plant spread, leaf area , stem diameter, colour grade, visual plant grade.

INTRODUCTION

Indoor gardening has gained a considerable importance due to paucity of ground space for development of gardens in the present day apartment culture in most of the cities and towns. In this context indoor foliage plants or house plants play a significant role in indoor gardening which are extensively used for interior decoration. Several foliage plants suitable for this purpose are used by the plant lovers under tropical and subtropical climatic conditions. Among these plants Aglaonema and Dieffenbachia are two popular foliage plants which are widely used by the people for their attractive variegated foliage and easy culture. However, for successful growing of these foliage plants in addition to providing ideal environmental condition, suitable growing media or potting media is also equally important which enhances their look thus making the plants more attractive. Various growing media compositions have been tried by the researchers for pot culture of these two foliage plants with varying degrees of success. The potting media used to grow house plants can range from 100 per cent organic to approximately 50 per cent organic and 50 per cent inorganic matter Bose and Chowdhury, 1991) The key factors in selecting potting media include aeration, moisture retention and nutrient status. The present investigation was carried out to study the impact of different media compositions and to find out the most suitable media for successful culture of indoor foliage plants Aglaonema cv.Silver Queen and dieffenbachia cv. Tropic Snow under local climatic condition.

MATERIALS AND METHODS

The present investigation was undertaken in form of a pot culture experiment in the Department of Horticulture, Institute of Agricultural Sciences, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, during the year2018-19. The trial was conducted in form of a Factorial Experiment in Completely Randomized Design which consisted of two factors viz., indoor plant species and growing media as treatments and these were replicated three times. There were three pots per replication per treatment. In this experiment rooted shoot tip cuttings of Aglaonema cv. Silver Queen(S_1) with an average length of 30 cm and two node rooted stem cuttings of Dieffenbachia cv. Tropic Snow(S_2) with an average length of 10 cm were used as planting materials which were grown in five different media compositions viz., M_1(2 parts of garden soil+ 1 part of FYM), M_2 (2 parts of garden soil + 1 part of coarse sand +1 part of FYM), M_3 (2 parts of garden soil +1 part of coco peat), M_4 (2 parts of garden soil +1 part of coarse sand +1 part of coco peat) and M_5 (2 parts of FYM + 1 part of coco peat) in which the ingredients were mixed in required proportion on volume basis.

The experiment was conducted inside a shade net house with 70 % shade erected in the premises of the institute. Planting was done in 25 cm size earthen pots on 26 October 2018 during afternoon hours at a depth of about 7.50 cm. After planting, the pots were drenched with fungicidal solution containing 0.15 % bavistin to protect

the planting materials from fungal infection. The average relative humidity(RH) in side the shade net house was measured by installing dry bulb and wet bulb thermometer which ranged from as high as 60 per cent in October 2018 to as low as 35 per cent in February 2019. The average light intensity inside the shade net house was measured by Illumino meter (Lux meter) which ranged from 490 lux in December 2018 to 880 lux in January 2019.

Each plant in individual pot was applied with 3.0 g urea, 6.0 g single super phosphate and 3.0 g muriate of potash three times at one month interval, the first one commencing from first January 2019. Plants were hand watered immediately after planting and there after at two to three days interval with a rose can. Intercultural operations like forking and weeding were carried out at regular interval. Plants inside the shade net house were more or less free from any insect pest attack or fungal infestation. However, foliar spraying of saff @3.0 g/l and plantomycin @ 1.0 g/l was done occasionally to avoid any pest attack or fungal disease in the plants.

Three plants per treatment under each replication were earmarked for recording various growth and quality parameters. The mean value of data collected on these three plants in respect of various parameters were calculated and used for statistical analysis. Observations on various growth and quality parameters were recorded at two months interval(unless otherwise mentioned), the first one commencing from26 December2018 ie. after two months of planting. The parameters recorded were as follows:

Plant spread- This was measured by stretching a meter scale along the direction of maximum spread of the leaves of the plants and recorded in cm

Individual leaf area-For measuring leaf area, 10 leaves at random of each plant species under study were collected from plants other than observational plants available in the garden. Their length and maximum breadth were measured individually and recorded. From this , the calculated leaf area was determined by multiplying the length and breadth of individual leaf. Then the actual leaf area of those individual leaves was determined by a leaf area meter Model SYSTRONICS- 211. The actual leaf area was divided by the corresponding calculated leaf area and a factor was found out. In the similar manner,10 factors were determined for 10 leaves in each plant species. Then the average of these 10 factors was found out. After that the actual leaf area under each treatment and replication was determined by multiplying the calculated leaf area (length x breadth already recorded) with this factor and the average was determined and recorded in cm^2.

Basal stem diameter- Basal stem diameter of each plant was measured at the base by a slide caliper and the average of observational plants under each treatment and replication was determined and recorded in cm.

Colour grade- Foliage colour of a plant is a quality parameter which improves the aesthetic value of the plant. The leaves with their natural colour free from any blemishes were visually evaluated three times (ie. during 26^{th} of February, March and April, 2019) by five persons based on 1 to 5 point .scale (poorest to best). The value of assessment was presented by the mean value of five observations.

Visual plant grade- Visual plant grade which represented the overall appearance with respect to growth, colour and presentability were visually assessed by five persons based on 1 to 5 (poorest to best) scale and the value of assessment was presented by the mean value of five observations.

RESULTS AND DISCUSSION

Plant spread

Interaction of media with plant species (MxS) was found to be significant with respect to plant spread during both the observations (Table-1). After four months of planting significantly higher spread (35.66 cm)of plants in Aglaonema (S_1) was observed in media M_5 (2 parts of FYM+ 1 part of coco peat).It was followed byM_4S_1 and M_2S_1 combinations which recorded 32.08 cm and 31.50 cm respectively. On the other hand the minimum of 29.39 cm was recorded under M_1S_1 combination. However, it was at par with M_3S_1(29.68 cm) and M_2S_1 and M_4S_1 combinations. After six months of planting it was found that Aglaonema (S_1) grown in M_5 media also recorded the maximum spread of 46.61 cm and it was followed by and at par with M_4S_1((44.31cm) and M_2S_1 (43.78cm) combinations. On the other hand significantly lower spread of 37.33 cm was recorded under M_3S_1 combination. Among various combinations of MxS_2, it was observed that Dieffenbachia (S_2) grown in media M_5 recorded maximum spread at all stages of plant growth. After four and six months of planting a plant spread of 29.73 cm and 39.92 cm were recorded under M_5S_2 respectively which differed significantly from other treatment combinations . It was followed by M_4S_2 which recorded 23.20 cm and 33.15 cm after four and six months of planting respectively. On the other hand minimum spread of 15.50 cm and 22.62 cm were recorded under M_3S_2 after four and six months of planting respectively. However, it was at par with M_1S_2 (18.10 cm) after four months of planting and significantly lower under the same treatment combination (M_3S_2) after six months of planting.

Individual leaf area

Various combinations of potting media and plant species significantly influenced the average leaf area at all stages of plant growth (Table-1).Among various combinations of MxS_1, maximum leaf area of 70.29 $cm^2$was recorded in Aglonema (S_1) grown in M_5 media composed of 2 parts of FYM + 1 part of coco peat and it was at par with the same recorded under M_2S_1 (68.82cm^2), M_4S_1(65.59cm^2) and M_1S_1 (62.76cm^2) combinations. On the other hand leaf area was found to be minimum (59.59 cm2) under M_3S_1 combination ie. Aglaonema grown in media composed of 2 parts of garden soil + 1 part of coco peat. How ever, it was at par with M_1S_1, M_4S_1 and M_2S_1 combinations. After six months of planting among various combinations of MxS_1, Aglaonema (S_1) grown in M_5 also recorded maximum leaf area of 100.74 cm^2 which differed significantly from other treatment combinations. It was followed by M_4S_1 combination which had a leaf area of 88.56 cm^2. On the other hand, minimum leaf area of 76.84 cm^2 was recorded under M_1S_1comnaton. How ever ,it was at par with M_3S_1 and M_2S_1 which recorded 82 04 cm^2 and 88.27 cm^2 area respectively. Among various combinations of MxS_2 maximum leaf area of individual leaf was noticed under M_4S_2 which recorded a value of 114.94 cm^2 after four months of planting and it was followed by and at par with M_5S_2 which had a value of 108.54 cm^2. On the other hand minimum leaf area (49.14 cm^2) was recorded under M_1S_2 combination. However, it did not show any significant variation from M_2S_2 combination which recorded an average

leaf area of 53.97 cm^2.After six months of planting Dieffenbachia (S_2) grown in media M_4 also recorded maximum leaf area of 245.85 cm^2. It was followed by and at par with M_5S_2 combination (235.03 cm^2). On the other hand significantly lower leaf area of 133.33 cm^2 was recorded under M_1S_2 combination.

Basal stem diameter

Interaction effect of potting media with indoor foliage plant species (MxS) with respect to basal stem diameter is presented in Table -2. Among various combinations of MxS_1 ,maximum (2.57 cm) diameter was recorded under M_5S_1 ie. Aglaonema grown in 2 parts of FYM+1 part of coco peat after four months of planting and it was closely followed by the same grown in 2 parts of garden soil +1 part of coarse sand + 1 part of coco peat (M_4) which recorded a diameter of 2.24 cm. On the other hand the minimum diameter (1.88 cm) was recorded when Aglaonema (S_1) was grown in media M_1 composed of 2 parts of garden soil + 1 part of FYM during the same observation period. After six months of planting, maximum stem diameter was also recorded under M_5S_1 (3.43 cm)which was closely followed by M_4S_1 (2.69 cm) On the other hand the minimum (2.09 cm) was also observed under M_1S_1 combination. After four months of planting, among various combinations of MxS_2, maximum (1.71 cm) and minimum (1.23 cm) diameters were recorded when Dieffenbachia (S_2) was grown in M_5 (2 parts of FYM +1 part of coco peat) and M_1 (2 parts of garden soil + 1 part of FYM) media respectively. After six months of planting the same trend was followed .Maximum diameter of 2.53 cm was recorded under M_5S_2 which was followed by M_4S_2 (2.14 cm) combination. But, the minimum (1.65 cm) diameter was recorded when Dieffenbachia (S_2) was grown in M_3 composed of 2 parts of garden soil + 1 part of coco peat. However, no significant impact of various potting media on both the indoor foliage plant species was noticed during any of the observations.

Colour grade

Significant impact of potting media on in door foliage plant species with respect to visual colour grade was observed after four and six months of plant growth (Table-2). Among various combinations of MxS_1, Aglaonema (S_1) grown in M_5 (2 parts of FYM + 1 part of coco peat) had highest colour rating with a score of 4.70 after four months of planting which differed significantly from other treatment combinations. It was closely followed by M_2S_1 combination (ie Aglaonema grown in 2 parts of garden soil + 1 part of coarse sand + 1 part of FYM) which had a visual scoring of 4.62. On the other hand significantly lower rating for colour was observed underM_3S_1 ie Aglaonema grown in 2 parts of garden soil +1 part of coco peat with a visual score of 3.91.After six months of planting, plants under M_5S_1 also had significantly higher grade which recorded a scoring of 4.81 and it was followed by M_1S_1 and M_2S_1 which had visual scoring of 4.65 and 4.61 respectively. On the other hand significantly lower scoring of 3.73 was awarded to plants grown under M_3S_1 combination. Among various combinations of MxS_2, the highest (4.53) and lowest (3.78) rating for colour were obtained by plants under M_5S_2 and M_3S_2 ie Dieffenbachia grown in 2 parts of FYM +1 part of coco peat (M_5) and 2 parts of garden soil + 1 part of coco peat (M_3) respectively. After six months of planting Dieffenbachia plants(S_2) grown in 2 parts of FYM +1 part of coco peat (M_5) had significantly better colour with a visual rating of 4.85. It was followed by those grown under M_2S_2 and M_4S_2 combination which had visual scoring of 4.61 and 4.51 respectively. On the other hand plants of Dieffenbachia

grown(S_2) grown in media M_3 (2parts of soil + 1 part of coco peat) had significantly lower rating of 4.35 among all the treatment combinations.

Visual plant grade

Visual plant grading related to overall look or presentability of indoor foliage plants as influenced by various potting media was done in a 5 point scale(1- 5 , poorest – best). It was observed that comparative perfo1rmance of the two in door foliage plants, Aglaonema cv. Silver Queen(S_1) and Dieffenbachia cv. Tropic Snow (S_2) in various potting media compositions(M) with respect to visual grade of plants was significant after five months of planting(Table-3). Among various combinations of MxS_1 Aglaonema(S_1) grown in M_5 comprised of 2 parts of FYM +1 part of coco peat had significantly higher score(4.69) as compared to other combinations. It was followed by M_2S_1(4.32) combination. On the other hand the lowest score of 3.73 was awarded to plants grown under M_3S_1 ie. Aglaonema grown in 2 parts of garden soil + 1 part of coco peat and it was at par with M_4S_1 (3.84) and M_1S_1 (3.92) combinations.

Among various combinations of MxS_2, Dieffenbachia (S_2) grown in media M_5(2 parts of FYM + 1 part coco peat) recorded the highest score of 4.59 which differed significantly from other combinations. It was followed by M_4S_2 combination which had a score of 4.47. On the other hand the lowest value of 3.70 was scored in respect of visual grading under M_3S_2 (ie Dieffenbachia grown in 2 parts of garden soil +1 part of coco peat) as well as under M_1S_2 (ie. Dieffenbachia grown in 2 parts of garden soil + 1 part of FYM) combinations.

The results of the study are discussed as follows: .

It was observed that among various MxS combinations, potting media composed of 2 parts of FYM + 1 part of coco peat (M_5) had significant influence on both the plant species ie. Aglaonema (S1) and Dieffenbachia (S_2) with respect to almost all the growth and quality parameters under study (viz.,plant spread, individual leaf area, basal stem diameter, colour grade and visual grade of the plants). Beneficial effects of FYM and coco peat which are the ingredients of M_5 have also been explained by earlier workers. Bhatia *et al* (2004) found that FYM and coco peat amended media (soil + FYM + coco peat) improved several growth and floral characters in potted carnation. Noguera *et al* (2000) also studied the importance of coco peat as a growing medium due to high porosity and nutritive value. It is a well known fact that FYM improves texture, structure and water holding capacity of the media. Further, it provides all essential nutrients (both macro and micro) required for plant growth. Similarly coco peat also improves porosity, wettability, water holding capacity, cation exchange capacity and buffers pH well in a very acceptable range for plant growth,(Anjana *et al*,2017).Hence, M_5 composed of 2 parts of FYM and 1 part of coco peat in absence of soil found to be the most favorable media which could improve various growth parameters. Improvement of plant spread of potted tube rose (Ikram *et al* 2012) in media composed of coco nut coir and FYM at 1:1 ratio and potted Dieffenbachia (Sarkar *et al*, 2016) in media comprised of soil + sand + FYM at 2:1 : 1 ratio have been reported earlier. Coco peat in addition to affording higher pore space and water holding capacity, it allows air, nutrient and water to the root zone which might be one of the reasons for vigorous growth of plants in Aglaonema

as observed by Swetha *et al* (2014).Improvement of other growth parameters like leaf area(Anjana *et al*, 2017) of croton cv.Petra and rose (Thakur,2005) in coco peat and FYM amended media, diameter of shoot in Dieffenbachia (Singh and Gupta, 2008) and begonia (Gupta and Singh,2008) in sand and FYM amended media have been reported by earlier workers.

Performance of plants grown in M_4 where soil was amended with sand and coco peat(2:1:1 v/v) had better effect next to M_5 with respect to parameters like plant spread, leaf area and basal stem diameter in both the foliage plants Aglaonema (S_1) and Dieffenbachia (S_2). Improvement of leaf area of Aglaonema in coco peat and sand amended media (coco peat + sand + vermi compost @ 2 :1 :1 ratio) has also been reported by Swetha (2013) It was observed that media M_4 had better effect on Dieffenbachia (S_2) than Aglaonema (S_1) with respect to leaf area of individual leaves .Addition of sand increases water holding capacity and aeration of the mix. Addition of coco peat makes it resistant to bacterial and fungal growth, it has great oxygenation properties which is important for health root development. Though coco peat is low in nitrogen, calcium and magnesium, it is relatively high in phosphorous and potassium,(Gohil *et al* 2018).

Performance of both the indoor plants (S_1 and S_2) grown in media M_2 composed of 2 parts of garden soil + 1 part of coarse sand +1 part of FYM also found beneficial with respect to some growth and quality parameters. Parameters like leaf area, colour grade and visual grade of plants were improved in Aglaonema(S_1) next to M_5S_1 while quality parameter like colour grade of plants was also improved in Dieffenbachia next to M_5S_2. It has already been reported about the usefulness of sand in improving water holding capacity and aeration of media (Gohil *et al* 2018).Further ,the beneficial effect of sand and FYM in growing media of potted tuberose has also been reported by Ikram *et al* 2012).

Positive influence of potting media consisting of FYM, coco peat and coarse sand as ingredients with or with out soil on colour grade and visual plant grade as observed in the present study in media M_5 and M_2 on foliage plants species S_1 and S_2 has been reported by earlier workers. Swetha(2013) and Swetha *et al* (2014) recorded higher score for visual colour grade and plant grade for Aglaonema in media composed of coco peat + sand + vermi compost at 2:1:1 ratio and coco peat +sand + FYM +vermi compost at 2:1:1:0.5 ratio respectively Higher nitrogen available to plants in this medium might be the reason for higher colour intensity. Further, plants grown in coco peat amended media are shown to have higher production and accumulation of total protein and amino acid in their stem (Scagel, 2003). This could be a reason for higher visual grade. Further, improved nutrition from FYM might have changed the biochemical properties of a plant like chlorophyll, enzyme and protein synthesis which could have been responsible for higher visual plant grade. On the other hand it was observed that the coco peat or FYM alone mixed with soil at 1:2 ratio as in M_3 and M_1 was not effective in bringing significant improvement in performance of both the indoor foliage plants with respect to various parameters under study.

Based on the results of the study it was concluded that the relative performance of both the indoor foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv, Tropic Snow grown in media M_5 composed of 2 parts of FYM and 1 part of coco peat was most satisfactory with respect to all the growth and quality parameters showing slight variation in performance between the two plants . Performance of M_4 composed of 2 parts of garden soil +1

part of coarse sand + 1 part coco peat was next to M_5 with respect to most of the parameters under study. However, colour grade and visual grade of Aglaonema (S_1) were better under M_2 comprised of 2 parts garden soil + 1 part of coarse sand +1 part of FYM next to M_5.

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Table 1 Impact of potting media on plant spread and individual leaf area of in door foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow at various stages of growth

Treatment combinations Potting media(M) X Plant Species(S)	Plant spread (cm)		Individual leaf area(cm^2)	
	After 4 months of planting	After 6 months of planting	After 4 months of planting	After 6 months of planting
M_1 (2parts soil +1 part FYM) x **S_1**(Aglaonema)	29.39	41.09	62.76	76.84
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_1**(Aglaonema)	31.50	43.78	68.82	88.27
M_3 (2 parts soil + 1 part coco peat) x **S_1** (Aglaonema)	29.68	37.33	59.59	82.04
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_1**(Aglaonema)	32.08	44.31	65.59	88.56
M_5 (2 parts FYM + 1 part coco peat) x **S_1**(Aglaonema)	35.66	46.61	70.29	100.74
M_1 (2parts soil +1 part FYM) x **S_2**(Dieffenbachia)	18.10	27.54	49.14	133.33
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_2** (Dieffenbachia)	18.95	31.50	53.97	159.83
M_3 (2 parts soil + 1 part coco peat) x S_2 (Dieffenbachia))	15.50	22.62	83.97	147.42
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_2** (Dieffenbachia)	23.20	33.15	114.94	245.85
M_5 (2 parts FYM + 1 part coco peat) x S_2 (Dieffenbachia)	29.73	39.92	108.54	235.03
SEm (±)	1.12	1.03	3.13	3.93
CD at 5%	3.31	3.04	9.25	11.62

Table 2 Impact of potting media on basal stem diameter and colour grade of door foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow at various stage of growth

Treatment combinations Potting media(M) X Plant Species(S)	Basal stem diameter (cm)		Colour grade (1-5 scale)	
	After 4 months of planting	After 6 months of planting	After 4 months of planting	After 6 months of planting
M_1 (2parts soil +1 part FYM) x **S_1**(Aglaonema)	1.88	2.09	4.24	4.65
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_1**(Aglaonema)	2.12	2.56	4.62	4.61
M_3 (2 parts soil + 1 part coco peat) x **S_1** (Aglaonema)	1.93	2.34	3.91	3.73
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_1**(Aglaonema)	2.24	2.69	4.12	4.45
M_5 (2 parts FYM + 1 part coco peat) x **S_1**(Aglaonema)	2.57	3.43	4.70	4.81
M_1 (2parts soil +1 part FYM) x **S_2**(Dieffenbachia)	1.23	1.95	4.16	4.41
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_2** (Dieffenbachia)	1.39	2.11	4.46	4.61
M_3 (2 parts soil + 1 part coco peat) x **S_2** (Dieffenbachia))	1.38	1.65	3.78	4.35
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_2** (Dieffenbachia)	1.41	2.14	3.99	4.51
M_5 (2 parts FYM + 1 part coco peat) x S_2(Dieffenbachia)	1.71	2.53	4.53	4.85
SEm (±)	1.12	1.03	0.02	0.01
CD at 5%	NS	NS	0.06	0.03

Table 3 Impact of potting media on visual plant grade of in door foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow after five months of plant growth

Treatment combinations Potting media(M) X Plant Species(S)	Visual plant grade after 5 months of planting (1-5 scale)	
	Aglaonema (S_1)	Dieffenbachia (S_2)
M_1 (2parts soil +1 part FYM)	3.92	3.70
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM)	4.32	4.31
M_3 (2 parts soil + 1 part coco peat)	3.73	3.70
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat)	3.84	4.47
M_5 (2 parts FYM + 1 part coco peat)	4.69	4.59
SEm (±)	0.04	
CD at 5%	0.19	