Relative performance of indoor foliage plants Aglaonema and Dieffenbachia grown in different media compositions

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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 combination 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. Parameters like plant height and number of leaves per plant recorded the highest value under M_5S_1, yet it remained at par with M_2S_1 or M_4S_1 combinations. Although leaf length and width were highest under M_5S_1, no significant variation was noticed among various MxS_1 combinations with respect to these two growth parameters. On the other hand growth parameter like number of new leaves emerged per plant per month and scoring for quality parameter like visual plant grade were significantly higher under this treatment combination. 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 width and number of new leaves emerged while parameters like plant height, number of leaves per plant, leaf length and visual plant grade were 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 which recorded the lowest plant height as well as significantly lower values for number of new leaves emerged and visual plant grade where as the performance of M_1S_1 combination ie. Aglaonema grown in 2 parts of garden soil +1 part of FYM had poor performance with respect to number of leaves per plant, leaf length and leaf width. 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 highest values for plant height,, number of leaves per plant, number of leaves emerged per plant and visual scoring for plant grade but followed by and at par with either M_4S_2 or M_2S_2 combination. 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 greater plant height, leaf length and number of new leaves emerged per plat next to M_5S_2 combination. Other parameters like number of leaves, and visual plant grade were also improved under M_2S_2 next to M_5S_2 combination. Significantly lower plant height was observed under M_3S_2 combination. Besides, lower values

were recorded for other parameters like number of leaves per plant, leaf width and number of new leaves emerged per plant per month under M_3S_2 and M_1S_2 combinations which were statistically comparable to each other.

Key words: In door foliage plants, Aglaonema, Dieffenbachia, plant height, number of leaves, leaf length , leaf width, number of new leaves emerged, visual plant grade.

INTRODUCTION

Among a large number of indoor foliage plants available for interior decoration under tropical and sub tropical climatic conditions, Aglaonema and Dieffenbachia are two important and popular ever green ornamentals which are grown for their attractive foliar variegation and tolerance to lowlight conditions. For successful growing of indoor plants in general and Aglaonema and Dieffenbachia in particular in pots, apart from providing ideal environmental conditions, composition of potting media also plays a significant role which influences growth and quality of in door plants to a greater extent. Swetha(2013) studied the effect of various potting media and reported the usefulness of coco peat, sand, FYM and vermicompost in various combinations influencing growth and quality of Aglaonema while Sarkar *et al* (2016) evaluated the effect of different growing media compositions on growth and development of Dieffenbachia in pots and observed that *Dieffenbachia bowmanni* produced maximum plant height, leaf length, width and plant spread in media composed of soil + sand + FYM in 2:1:1 ratio but under potting mixture of soil + sand + FYM + vermicompost at 2:1:1 :0.5, the plant maintained more number of leaves along with medium plant height. The present investigation was carried out to study the relative performance of two indoor foliage plants, Aglaonema cv.Silver Queen and Dieffenbachia cv.Tropic Snow in five potting media compositions in various combinations influencing growth and quality to find out the most suitable media composition exhibiting maximum growth and visual quality of each plant species.

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 height- It was measured from the media level in the pot to the highest point of growth (ie. tip of the top most leaf) and was recorded in cm.

Number of leaves- The total number of leaves present in each plant was counted and recorded.

Leaf length and width- The length of the longest leaf in the plant was measured and the widest part of the same leaf was measured to record the leaf width, both the length and width of leaf were recorded in cm.

The number of new leaves emerged- This observation was recorded twice after five and six months of planting ie, on 26 March and 26 April 2019 during the experimental period. The number of new leaves produced during the period from 26 February to 26 March 2019 as well as between 26 March and April 2019 were counted for all observational plants under each treatment and replication and the average was determined.

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 height

The results of the study indicated that interaction effect of various potting media with indoor foliage plant species was found to be significant with respect to plant height at various stages of plant growth(Table-1). After four months of planting, among various combinations of potting media (M) and plant species (S_1),

Aglaonema (S_1) grown in media M_1(2 parts of garden soil +1 part of FYM) recorded maximum height of 30.15 cm which was followed by and at par with M_2S_1(29.40 cm) and M_4S_1 (27.82 cm). On the other hand plant height in Aglaonema grown in M_3 (2 parts of garden soil + 1 part of coco peat) was the shortest (26.82 cm) among all M x S_1 combinations.How ever, it was at par with M_5S_1 (26.83 cm),M_4S_1 and M_2S_1 with out showing significant variation. After six months of planting the height in Aglaonema (S_1) was maximum (32.81 cm) when grown in media M_5(2 parts of FYM + 1 part of coco peat). However, it was at par with other combinations like M_2S_1, M_1S_1 and M_4S_1 which recorded average plant height of 32.14 cm, 32.13 cm and 30.95 cm respectively. On the other hand the minimum height of 29.55 cm was recorded under M_3S_1 ie. when Aglaonema was grown in media comprised of 2 parts of garden soil +1 part of coco peat. However, it was at par with M_4S_1,M_1S_1, and M_2S_1 combinations.

Among various combinations of M xS_2, it was observed that after four and six months of planting maximum height in Dieffenbachia (S_2) was noticed when grown in M_5 (2 parts of FYM +1 part of coco peat) which recorded plant height of 29.19cm and 37.53 cm respectively. It was followed by and at par with M_4S_2 which recorded 27.47cm and 36.51 cm height respectively. The minimum was recorded in M_3S_2 during both the observations which had plant height of 16.34 cm and 23.35 cm after four and six months of planting respectively.

Number of leaves per plant

As indicated in Table-1, various combinations of media with plant species after four months of planting produced significantly more number of leaves (7.99 nos) under M_5S_1 combination ie. Aglaonema grown in 2 parts of FYM + 1 part of coco peat and it was followed by M_2S_1 which recorded an average of 6.33 leaves per plant. On the other hand the minimum (3.40 cm) was recorded in M_1S_1 ie. Aglaonema grown in 2 parts of garden soil + 1 part of FYM. However, it was at par withM_4S_1(Aglaonema grown in 2 parts of garden soil + 1 part of coarse sand + 1 part of coco peat) which had 4.10 leaves. After six months of planting it was observed that Aglaonema (S_1) grown in M_5 also recorded maximum (9.44 nos.)leaves per plant and 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 recording a value of 9.33 leaves with out showing significant variation from each other. On the other hand minimum number of leaves (4.89) was also recorded with M_1S_1 combination. However, it was at par with M_4S_1 (5.66) and M_3S_1(5.77) combinations.

Among various combinations of M x S_2 it was observed that Dieffenbachia (S_2) grown in M_5 (2 parts of FYM + 1 part of coco peat) recorded maximum number of leaves where as the same grown in M_3 (2 parts of garden soil + 1 part of coco peat) recorded the minimum during all stages of plant growth. However, after six months of planting average leaf number in Dieffenbachia grown under various media compositions was statistically comparable with each other .On the other hand after four months of planting the number of leaves under M_5S_2 remained at par with M_4S_2 (2.99). Number of leaves per plant in Dieffenbachia(S_2) grown in M_5 were 3.66 and 5.00 after four and six months of planting respectively while the minimum leaf number as recorded under M_3S_2 was 1.55 and 3.55 respectively during the same period of observation.

Leaf length

Various combinations of media and plant species (MxS) showed significant variation with respect to leaf length at various stages of plant growth (Table-2).Among various MxS_1 combinations the longest leaf of 19.60 cm was recorded in Aglaonema (S_1) grown in M_2 media (2parts of garden soil + 1 part of coarse sand +1 part pf FYM) after four months of planting while the shortest was noticed under M_3S_1(18.29 cm) during the same observation period. After six months of planting the longest and the shortest leaves were produced in Aglaonema (S_1) grown in M_5 (22.93 cm) and M_1(20.75 cm) media respectively. However, various combinations of MxS_1 could not influence the leaf length significantly at any stage of plant growth

Among various combinations of MxS_2, the longest leaf (19.38 cm) was observed under M_5S_2 ie. Dieffenbachia grown in 2 parts of FYM + 1 part of coco peat after four months of planting and it was followed by M_4S_2 (17.77 cm) with out showing significant variation. The minimum (10.59 cm) was recorded under M_1S_2 and it was at par with M_2S_2 (12.17 cm). After six months of planting significantly longer leaf (25.21 cm) was recorded under M_5S_2 combination and it was followed by M_4S_2 (21.70 cm). On the other hand the shortest leaf (18.91cm) was recorded under M_1S_2 combination. However, it was at par with M2S2,M3S2 and M4S2 combinations.

Leaf width

Significant variation in leaf width was observed due to MxS interaction during four and six months of planting (Table-2). After four months of planting, maximum (4.61 cm) width was recorded under M_5S_1combination ie.Aglaonema (S_1) grown in 2 parts of FYM + 1 part of coco peat and it was followed by M_4S_1 ie.Aglaonema grown in 2 parts of garden soil + 1 part of coarse sand + 1 part of coco peat which recorded average width of 4.43 cm. On the other hand minimum width of 4.16 cm was recorded under M_3S_1 combination ie.Aglaonema grown in 2 parts of garden soil + 1 part of coco peat. How ever, leaf width under various combinations of MxS_1 was statistically comparable with each other. The same trend in leaf width was also observed after six months of planting due to MxS_1 combination. Maximum width (5.60 cm) was recorded under M_5S_1 followed by M_4S_1 (5.35 cm) combination while the minimum (4.70 cm) was recorded under M_1S_1 (Aglaonema grown in 2 parts of garden soil + 1 part of FYM) combination with out showing significant variation among various treatment combinations.

Among various combinations of MxS_2, after four months of planting maximum width (9.57 cm) of leaves was recorded under M_5S_2 combination ie. Dieffenbachia grown in 2 parts of FYM + 1 part of coco peat closely followed by and at par with M_4S_2(ie. Dieffenbachia grown in 2 parts of garden soil + 1 part of coarse sand + 1 part of coco peat) which recorded a width of 8.79 cm. On the other hand minimum width (6.12 cm) was recorded under M_2S2 combination ie. Dieffenbachia grown in 2 parts of garden soil + 1 part of coarse sand + 1 part of FYM and it was at par with M_1S_2 (6.39 cm) combination ie. Dieffenbachia grown in 2 parts of garden soil + 1 part of FYM. After six months of planting significantly wider leaves (16.85cm) were produced under M_5S_2 combination ie. Dieffenbachia grown in M_5 medium composed of 2 parts of FYM + 1 part of coco peat. It was

followed by M_4S_2 combination which recorded 12.85 cm wider leaves. On the other hand it was minimum (9.62 cm) under M_1S_2 combination and it was at par with M_2S_2 (9.93 cm) combination.

Number of new leaves emerged per month

Various combination of potting media and plant species (M x S) were found to be Significant with respective to emergence of new leaves per plant per month during both the observations (Table-3). Interaction of MxS_1 indicated that highest number of leaves (1.78) were emerged in Aglonema (S_1) grown in media M_5(2parts of FYM + 1 part of coco peat) after five months of planting (between February and March 2019) which was closely followed by and at par with M_2S_1 which recorded 1.77 new leaves during that period and these two differed significantly from other combinations. On the other hand significantly lower value (1.11) was recorded under M_3S_1 combination. After six months of planting significantly more number of leaves(2.67) were emerged between March and April 2019 which recorded under M_5S_1 and it was followed by M_4S_1(2.11) combination On the other hand significantly lower number of new leaves(1.44) emerged under M_3S_1 combination ie. Aglaonema grown in 2 parts of garden soil + 1 part of coco peat.

Among various combinations of M_2 x S_2 significantly higher number of new leaves emerged in Dieffenbachia (S_2)grown in M_5 ie 2 parts of FYM + 1 part of coco peat which recorded 1.40 leaves per month after five months of planting which was followed by M_4S_2(1.20). On the other hand emergence of lowest number of leaves was observed under M_1S_2, M_2S_2 and M_3S_2 which had only 1.00 leaf per plant in each case during the above said period. After six months of planting significantly more number of new leaves also emerged under M_5S_2(1.33) combination which was followed by M_4S_2(1.11). On the other hand the lowest and equal number of new leaf(1.00) was emerged under M_1S_2, M_2S_2 and M_3S_2 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 performance 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 during the observations recorded after four and six months of planting(Table-3)Various combinations of MxS_1 indicated that after four months of planting Aglaonema grown in media M_5 comprised of 2 parts of FYM +1 part of coco peat had significantly higher score(4.71) as compared to other combinations. It was followed by M_2S_1(4.49) combination. On the other hand lowest score of 4.05 was awarded to plants grown under M_1S_1 as well as M_4S_1 combinations. However, it was at par with M_3S_1 which had a score of 4.07. After six months of planting those grown under M_5S_1 also had significantly higher score(4.82) which was followed by M_2S_1(4.62) and M_4S_1(4.36) combinations. On the other hand significantly lower value(3.71) for visual plant grade was scored under M_3S_1 combination.

Among various combinations of MxS_2, after four months of planting Dieffenbachia (S_2) grown in media M_5(2 parts of FYM + 1 part coco peat) recorded the highest score of 4.77 which differed significantly from other combinations. It was followed by M_2S_2 combination which had a score of 4.51. On the other hand significantly lower value of 3.77 was scored in respect of visual grading under M_3S_2 combination ie Dieffenbachia grown in 2 parts of garden soil +1 part of coco peat. After six months of planting, plants grown M_5S_2 also had the highest score of 4.72 which was followed by and at par with M_2S_2(4.63) combination. On the other hand the lowest score(4.07) was obtained by plants grown under M_3S_2 combination.

The results of the study are discussed as follows: .

It was noticed that among various MxS combinations performance of Aglaonema (S_1) as well as Dieffenbachia (S_2) grown in 2 parts of FYM + 1 part of coco peat (M_5) was the best with respect to all the growth and quality parameters under study (viz.,plant height, number of leaves/ plant, leaf length and width, number of new leaves emerged per month 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 height in potted tube rose (Ikram *et al* 2012) and number of leaves in Anthurium (Singh, 2006) in media composed of coco nut coir/ coco peat and FYM at 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).

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 height, leaf width and number of new leaves emerged per plant per month in both the foliage plants Aglaonema (S_1) and Dieffenbachia (S_2).Besides, media M_4 also improved the leaf length in Dieffenbachia next to M_5 (ie. M_5S_2).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 number of leaves per plant, leaf length and visual grade of plants were improved in Aglaonema(S_1) next to M_5S_1 while quality parameters like visual 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 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 *et al* (2014) recorded higher score for visual plant grade for Aglaonema in media composed of coco peat +sand + FYM +vericompost at 2:1:1:0.5 ratio. 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, Visual grade of both the plants 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 Interaction effect of in door foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow with potting media on plant height and number of leaves at various stage of growth

Treatment combinations Potting media(M) X Plant Species(S)	Plant height (cm)		Number of leaves/plant	
	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)	30.15	32.13	3.40	4.89
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_1**(Aglaonema)	29.40	32.14	6.33	9.33
M_3 (2 parts soil + 1 part coco peat) x **S_1** (Aglaonema)	26.82	29.55	5.44	5.77
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_1**(Aglaonema)	27.82	30.95	4.10	5.66
M_5 (2 parts FYM + 1 part coco peat) x **S_1**(Aglaonema)	26.83	32.81	7.99	9.44
M_1 (2parts soil +1 part FYM) x **S_2**(Dieffenbachia)	17.51	28.42	2.20	4.77
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_2** (Dieffenbachia)	18.61	30.21	2.40	4.89

M_3 (2 parts soil + 1 part coco peat) x S_2 (Dieffenbachia))	16.34	23.35	1.55	3.55
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_2** (Dieffenbachia)	27.47	36.51	2.99	4.33
M_5 (2 parts FYM + 1 part coco peat) x S_2 (Dieffenbachia)	29.19	37.53	3.66	5.00
SEm (±)	1.01	1.04	0.27	0.67
CD at 5%	3.00	3.08	0.82	1.98

Table 2 Interaction effect of in door foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow with potting media on leaf length and width at various stage of growth

Treatment combinations Potting media(M) X Plant Species(S)	**Leaf length (cm)**		**Leaf width (cm)**	
	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)	18.43	20.75	4.30	4.70
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_1**(Aglaonema)	19.60	21.92	4.50	5.16
M_3 (2 parts soil + 1 part coco peat) x **S_1** (Aglaonema)	18.29	21.32	4.16	4.99
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_1**(Aglaonema)	19.23	21.12	4.43	5.35
M_5 (2 parts FYM + 1 part coco peat) x **S_1**(Aglaonema)	19.54	22.93	4.61	5.60
M_1 (2parts soil +1 part FYM) x **S_2**(Dieffenbachia)	10.59	18.91	6.39	9.62
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_2** (Dieffenbachia)	12.17	20.23	6.12	9.93
M_3 (2 parts soil + 1 part coco peat) x **S_2** (Dieffenbachia))	14.97	20.42	7.63	10.03
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_2** (Dieffenbachia)	17.77	21.70	8.79	12.85
M_5 (2 parts FYM + 1 part coco peat) x S_2(Dieffenbachia)	19.38	25.21	9.57	16.85
SEm (±)	0.84	0.98	0.46	0.63
CD at 5%	2.49	2.92	1.38	1.87

Table 3 Interaction effect of in door foliage plants Aglaonema cv. Silver Queen and Dieffenbachia cv. Tropic Snow with potting media on number of new leaves emerged and visual plant grade at various stage of growth

Treatment combinations Potting media(M) X Plant Species(S)	Number of new leaves emerged		Visual plant grade (1-5 scale)	
	After 5 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)	1.53	1.66	4.05	4.24
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_1**(Aglaonema)	1.77	1.78	4.49	4.62
M_3 (2 parts soil + 1 part coco peat) x **S_1** (Aglaonema)	1.11	1.44	4.07	3.71
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat) x **S_1** (Aglaonema)	1.22	2.11	4.05	4.36
M_5 (2 parts FYM + 1 part coco peat) x **S_1**(Aglaonema)	1.78	2.67	4.71	4.82
M_1 (2parts soil +1 part FYM) x **S_2** (Dieffenbachia)	1.00	1.00	4.13	4.27
M_2 (2 parts soil+ 1 part coarse sand + 1 part FYM) x **S_2** (Dieffenbachia)	1.00	1.00	4.51	4.63
M_3 (2 parts soil + 1 part coco peat) x **S_2** (Dieffenbachia))	1.00	1.00	3.77	4.07
M_4 (2 parts soil +1 part coarse sand + 1 part coco peat x **S_2** (Dieffenbachia)	1.20	1.11	4.11	4.16
M_5 (2 parts FYM + 1 part coco peat) x **S_2** (Dieffenbachia)	1.40	1.33	4.77	4.72
SEm (±)	0.03	0.02	0.05	0.06
CD at 5%	0.09	0.09	0.15	0.18