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Growth and Yield of Nutmeg Budded on Wild (*Myristica beddomei* King) and Cultivated (*Myristica fragrans* Houtt) Rootstocks

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ABSTRACT: Nutmeg (*Myristica fragrans* Houtt.) is commercially propagated through budding rather than grafting. Nutmeg plants budded on wild nutmeg rootstock as well as self-rootstock are popular, but their performance exhibits variation across the locations. Rootstock-scion interaction studies are of high relevance in this perennial tree spice. Very less information is available on the field performance of budded nutmeg trees on various rootstocks. The present study was conducted with the objective of assessing the performance of nutmeg trees budded on self (*Myristica fragrans*) and wild rootstock (*Myristica beddomei*) in terms of growth and yield. Five budded trees on wild and self-nutmeg rootstock each were purposively selected in the five districts of Kerala. Six morphological and ten yield characteristics were recorded from the selected trees for two consecutive years. Univariate analysis of variance was performed to understand the extent of variation in performance of the budded nutmeg trees on self as well as wild rootstocks. Out of thirteen quantitative morphological and yield characteristics studied, eleven characteristics recorded significantly higher values in the trees budded on self-rootstock. Significantly higher yield characteristics obtained in the trees budded on self-rootstock were high fresh nut (6.93kg/tree) and mace yield per tree (5.19 kg/tree); dry nut (1.92 kg /tree) and mace yield per tree (1.04 kg/tree); and dry kernel yield per tree (3.84 kg/tree). Irrespective of location and altitude, the overall performance of nutmeg trees budded on self-rootstock (*Myristica fragrans*) was superior than the trees budded on wild rootstock (*Myristica beddomei*).

Keywords: Nutmeg, *Myristica fragrans*, *Myristica beddomei*, self-rootstock and wild rootstock.

INTRODUCTION

Nutmeg *(Myristica fragrans* Houtt.*)* is an introduced crop to India and it belongs to the family Myristicaceae. *Myristica* is the most primitive cum largest genus of the family Myristicaceae (Sinclair, 1958). In India, four genera of Myristicaceae are currently found: *Myristica, Horsfieldia, Knema and Gymnocranthera.* Of 120 species, only five species of *Myristica* have been described from India, like *Myristica fragrans* Houtt. (commercially cultivated one), *M. malabarica* Lam., *M. beddomei* King, *M. magnifica* Bedd and *M. trobogarii* (Govind *et al.,* 2020; Sasikumar, 2021). The nut and mace of *Myristica fragrans* are mainly utilized as spice, that of *M. malabarica* used as dye source (Zachariah *et al.,* 2008), and the same economic parts in *M beddomei* and *M. andamanica* are used in traditional medicine (Manjunatha *et al.,* 2011).

Among the tree spices cultivated in Kerala, nutmeg (*Myristica fragrans* Houtt.) is a high-value crop in domestic as well as international trade. To attain the self-sufficiency in production of nutmeg, the area under cultivation need to be expanded in traditional and non-traditional areas by planting superior varieties and adopting improved agro-techniques. Since nutmeg is perennial and a dioecious-cross pollinated tree, the seeds derived from generative propagation will not be true to type to mother tree. Studies on identification of the sex of nutmeg saplings at an early stage remains yet unsuccessful (Shibu *et al.,* 2020). Hence in order to get desirable high yielding population of nutmeg, the only alternate method is vegetative propagation.

Adoption of vegetative propagation in nutmeg has increased substantially in recent years (Rema *et al.,* 1997). Among the various methods of vegetative propagation standardized in nutmeg, *in-situ* budding (field budding) and nursey budding are the widely adopted methods (Miniraj *et al.,* 2012). Nissar *et al.* (2019), reported that buds extracted from orthotropic shoots only exhibit vigorous and erect growth, even though the number of orthotropic shoots produced in a tree are limited. Nutmeg is commercially propagated through budding rather than grafting, as a single scion stick provides more number of orthotropic propagules in budding than using the whole orthotropic scion stick for grafting. Several workers have attempted studies on identifying suitable *Myristica* species that can be

utilized as rootstock in budding. *Myristica malabarica* and *Myristica beddomei* were the two best compatible rootstocks for budding as reported by IISR (2007). Lissamma *et al.* (2012), reported highest success percentage with green budding on *Myristica beddomei* (70%) followed by green budding on *Myristica fragrans* (65%). Nutmeg trees budded on *M malabarica* and *M beddomei* develop a swelling at the basal bud union (Miniraj *et al.*, 2012) and they exihibited differential performance at various locations. Rootstocks play a vital role in inducing different growth effects by combing the desirable attributes of two plants through budding. The effect of rootstock on growth, yield and quality are well demonstrated in temperate fruit crops in terms of precocity, yield, crop load and canopy management (Nimbolkar *et al.,* 2016). Rootstocks are primarily responsible for tree size and vigour. They also have a crucial role in providing anchorage for the tree; water and mineral uptake needed for the plant metabolism. Studies related to rootstocks and their influence on the budded trees assumes significance in tree spice like nutmeg. Very little studies have been conducted to understand the influence of rootstock on the performance of budded nutmeg trees. It is in this background, the present study was formulated to assess the best performance of nutmeg budded on different rootocks.

MATERIALS AND METHODS

The study was carried out during 2018-2020 at the Department of Plantation, Spices, Medicinal and Aromatic crops, College of Agriculture, Kerala Agricultural University, Thrissur. Five budded trees on wild nutmeg rootstock (*Myristica beddomei)* and self-rootstock (*Myristica fragrans*) each were purposively selected in the five districts (Malappuram, Palakkad, Thrissur, Ernakulam and Idukki) to investigate the performance of the budded nutmeg in terms of growth and yield. The budded trees were of the same age group (12-15 yrs old). The details of the budded nutmeg trees used in the study are listed in Table 1. Field performance of budded trees on self-rootstock and wild rootstock was assessed by recording the growth and yield parameters for two consecutive years. The growth parameters recorded were canopy shape, branching pattern, plant height, girth at 140 cm height, canopy spread in North-South, canopy spread in East -West, number of fruit bearing branches and fruit set percentage. The yield parameters recorded were number of fruits per m^2, number of fruits per tree, fresh and dry nut yield per tree, fresh and dry mace yield per tree, dry kernel yield per tree. The canopy shape of the mature tree was observed and grouped into narrowly pyramidal, pyramidal, oblong or globular. The branching pattern of the tree was recorded and was grouped into erect, spreading or drooping. The fully mature tree height was measured from the ground level to the tip portion of the canopy using tape and expressed in metres. The tree's girth was measured as the circumference of tree trunk at the height of 140cm from the ground level and expressed in centimetres. Tree canopy spread was taken in North-South and East-West directions recorded according to the maximum branching spread in the related directions. For fruit set percentage, mature flowers in a tree were tagged to record the fruit set which is expressed in terms of percentage. Number of fruits per m^2 was recorded by counting fruits in one metre square area from all the four sides of the tree regularly during the peak harvesting period. Number of fruits per tree was recorded by counting fruits regularly during the peak harvesting period. Fresh nut yield per tree was calculated by multiplying the singleton value of mean fresh nut weight and the total number of fruits per tree. Dry nut yield per tree were calculated by multiplying the singleton value of mean dry nut weight and the total number of fruits per tree. Similar to fresh and dry nut yield per tree, fresh and dry mace yield per tree and dry kernel yield per tree were also calculated. Design used was CRD and an independent two sample t test was performed. Univariate analysis of variance using general linear model was done on pooled morphological and yield data to arrive at the best performing rootstock for nutmeg in terms of morphological and yield characteristics.

Table 1: Study locations and selected nutmeg trees budded on self and wild rootsock.

Sr. No.	District	Location	Latitude (°N)	Longitude (°E)	Altitude (m)
1.	Malapuram	Karuvarakund	11.1582	76.359116	88
2.	Palakkad	Palakuzhy	10.50382	76.479683	428
3.	Thrissur	Chalakkudy	10.32056	76.324679	10
4.	Ernakulam	Kallurkadu	9.983663	76.709028	14
5.	Idukki	Kanjikuzhi	9.930318	76.939247	692

RESULTS AND DISCUSSIONS

Five budded bearing trees each on wild nutmeg as well as self-rootstocks were purposively selected from five locations namely Kanjikuzhi (692 m altitude), Palakuzhy (428 m), Karuvarakund (88 m), Kallurkadu (14 m) and Chalakudy(10 m) representing high, medium and low altitudes. The performance of budded nutmeg plants was assessed with regard to growth and yield. Wild nutmeg rootstock used in the current experiment was *Myristica beddomei* and self-rootstock used was *Myristica fragrans* Houtt. Data pertaining to the growth and yield characteristics are presented in Table 3.

A. Morphological characteristics

There are several key aspects of scion growth that are mediated by rootstock. Total plant size is a major scion trait that is controlled by rootstock and this has been shown in many plant families. Qualitative morphological characteristics considered in the study were canopy shape and branching pattern (Table 2).

Two canopy shapes observed were oblong and pyramidal. Nutmeg on the wild as well as self-rootstocks in all the four locations had pyramidal canopy shape, except in Karuvarakund where oblong shape was observed. Irrespective of locations and rootstocks, all the nutmeg plants showed erect branching pattern indicating that the rootstock did not show any significant effect on branching pattern in the tree, unlike in other spice crops such as clove, where the internodal length got reduced when the dwarf clove was approach grafted with both ordinary clove and dwarf clove rootstocks (IISR, 2007).

Table 2: Study locations and tree characteristics of budded nutmeg plants.

Sr. No.	Nutmeg trees	Locations	Canopy shape	Branching pattern
1.	WR	Karuvarakund	Oblong	Erect
	SR	Karuvarakund	Oblong	Erect
2.	WR	Palakuzhy	Pyramidal	Erect
	SR	Palakuzhy	Pyramidal	Erect
3.	WR	Chalakudy	Pyramidal	Erect
	SR	Chalakudy	Pyramidal	Erect
4.	WR	Kallurkadu	Pyramidal	Erect
	SR	Kallurkadu	Pyramidal	Erect
5.	WR	Kanjikuzhi	Pyramidal	Erect
	SR	Kanjikuzhi	Pyramidal	Erect

WR- Wild rootstock (*Myristica beddomei*); SR- Self rootstock (*Myristica fragrans*)

Data on quantitative growth parameters *viz.* plant height, girth at 140 cm height, canopy spread in North-South and East -West direction were also recorded which also showed variation on different rootstocks.

(i) Plant height(m): At Palakuzhy, Kallurkadu and Karuvarakund, trees budded on wild rootstock recorded significantly higher values for plant height (5.18 m, 5.09 m and4.42m respectively) when compared to the trees budded on self-rootstock. At Chalakudy, the trees budded on self and wild rootstock did not show any significant difference for plant height. However, at Kanjikuzhi, trees budded on self-rootstock recorded significantly higher values for plant height (6.04 m).

(ii) Girth at 140 cm height: Girth at 140 cm height differed significantly between the wild and self-rootstock budded trees. At Chalakudy, Kanjikuzhi and Karuvarakund, trees on self-rootstock recorded significantly higher values for girth at 140 cm height (74.10cm, 43.40 cm and 31.40 cm respectively) whereas, at Kallurkadu and Palakuzhy trees on wild rootstock (48.40 cm and 38.30 cm respectively) recorded significantly higher values for girth.

(iii) Canopy spread: Except Karuvarakund and Kallurkadu, Canopy spread in North -South direction varied significantly between the trees on two types of rootstock used. At Chalakudy and Kanjikuzhi, trees on self-rootstock recorded significantly higher values for canopy spread in North- South direction (7.67 m and 6.14 m respectively). However, at Palakuzhy, plants on wild nutmeg rootstock recorded highest values for canopy spread in North- South direction (4.97 m) at 5% level of significance.

Unlike the canopy spread in North-South, that in East-West direction did not vary significantly between the trees budded on wild and self-rootstocks. Only at Chalakudy and Kanjikuzhi, trees on self-rootstock recorded significantly higher canopy spread in East-West direction (7.57 m and5.85 m), rest in all other locations, non-significant effect was recorded. Hence trees budded on self-rootstock had higher canopy spread in both Noth-South and East-West directions in only two locations (Chalakudy and Kanjikuzhi).

Several reports are available on the influence of rootstock on tree architecture. Grafting of clementine scion on to several interspecific citrus rootstocks significantly varied tree height, canopy diameter, circumference and tree volume (Bassal, 2009). Gijon *et al*. (2010) showed that pistachio leaf area, leaf and strem dry weights varied based on the rootstock used.

B. Yield characteristics

For any crop, yield is the ultimate output, which defines the efficiency of crop inputs and management, which could be influenced even from the selection of good planting material. From nutmeg two products of commerce obtained are nut and mace. Yield parameters considered and recorded were fruit set (%), number of fruit bearing branches, number of fruits per m2, number of fruits per tree, fresh and dry nut yield per tree; fresh and dry mace yield per tree and dry kernel yield per tree.

(i) Fruit set percentage (%): Fruit set percentage varied significantly from 19.60 to 29.60 % in wild nutmeg budded plants and 24 to 35% in self-nutmeg budded plants. At Karuvarakund, Palakuzhy and Chalakudy plants budded on self-rootstock had significantly highest percentage of fruit set (35.0%, 32.80% and 24.80% respectively). Meanwhile at Kallurakad and Kanjikuzhi, there was no significant difference between the trees on self and wild rootstocks.

(ii) Number of fruit bearing branches: In three out of five locations, there was statistically significant difference between budded trees on self as well as wild rootstocks. Budded trees on wild rootstock at Palakuzhy (56.70) and Kallurkadu (53.50) recorded significantly highest number of fruit bearing branches. But at Karuvarakund, trees on self-rootstock was significantly different and recorded higher values for the fruit bearing branches.

Table 3: Tree growth and yield characteristics of nutmeg trees budded on wild as well as self-rootstocks.

		Karuvarakund				Palakuzhy				Chalakudy				Kallurkadu				Kanjikuzhi			
Sr. No.	**Parameter**	**WR**	**SR**	**t value**	**p-value**	**WR**	**SR**	**t value**	**p value**	**WR**	**SR**	**t value**	**p value**	**WR**	**SR**	**t value**	**p value**	**WR**	**SR**	**t value**	**p value**
1.	Plant height(m)	4.42*	4.05	2.10	0.05	5.18*	3.89	4.55	0.00	5.99	6.28	1.25	0.23	5.09*	4.41	5.42	0.00	4.67	6.04*	4.41	0.00
2.	Girth at 140cm height(cm)	28.60	31.40*	2.76	0.01	38.30*	26.60	8.26	0.00	56.70	74.10*	3.65	0.00	48.40*	40.40	2.84	0.01	32.30	43.40*	8.82	0.00
3.	Canopy spread N-S(m)	4.92	4.64	1.27	0.22	4.97*	4.13	4.28	0.00	6.22	7.67*	3.83	0.00	5.82	6.04	0.53	0.61	5.15	6.14*	2.84	0.01
4.	Canopy spread E-W(m)	4.90	5.25	1.81	0.09	5.12	4.63	1.79	0.09	6.37	7.57*	2.73	0.01	6.07	6.24	0.43	0.67	4.96	5.85*	3.31	0.00
5.	Number of fruit bearing branches	34.90	45.90*	3.80	0.00	56.70*	40.70	3.74	0.00	65.50	70.50	1.40	0.18	53.50*	37.50	7.04	0.00	54.00	56.50	0.53	0.60
6.	Fruit set percentage (%)	22.70	35.00*	8.70	0.00	29.60	32.80*	2.43	0.03	19.60	24.80*	2.84	0.01	27.70	24.00	1.52	0.15	25.00	31.30	1.69	0.11
7.	Number of fruits / m^2	10.40	19.90*	5.36	0.00	18.60*	13.90	3.26	0.00	17.00	24.60*	3.87	0.00	13.50	17.80	1.81	0.09	22.20	23.10	0.17	0.87
8.	Number of fruits per tree	293.00	391.50*	2.82	0.01	529.00	514.00	0.37	0.72	885.00	1080.00*	3.37	0.00	398.00	551.00	1.84	0.08	140.00	461.00*	8.24	0.00
9.	Fresh nut yield per tree (kg $tree^{-1}$)	3.22	4.24*	2.82	0.01	6.76	6.46	0.63	0.54	10.17	12.57*	2.96	0.01	4.66	6.40	1.67	0.11	1.20	4.99*	7.44	0.00
10.	Dry nut yield per tree (kg $tree^{-1}$)	2.33	3.04*	2.64	0.02	5.24	5.34	0.25	0.80	7.35	9.11*	3.59	0.00	3.33	4.44	1.47	0.16	0.89	4.01*	6.79	0.00
11.	Fresh mace yield per tree (kg $tree^{-1}$)	1.12	1.52*	2.73	0.01	1.95*	1.61	2.54	0.02	2.54	2.98	1.09	0.29	1.46	2.01	1.48	0.16	0.40	1.45*	6.59	0.00
12.	Dry mace yield per tree (kg $tree^{-1}$)	0.55	0.71	2.03	0.06	1.09	1.01	0.64	0.53	1.21	1.34	0.63	0.54	0.82	1.18	1.61	0.13	0.27	0.95*	5.48	0.00
13.	Dry kernel yield per tree (kg $tree^{-1}$)	1.63	2.11*	2.43	0.03	3.88	4.13	0.81	0.43	4.94	6.44*	3.36	0.00	2.49	3.48	1.73	0.10	0.67	3.02*	6.74	0.00

(iii) Number of fruits per m^2: Number of fruits per m^2 was significantly different between the plants budded on two types of rootstocks except at two locations (Kallurkad and Kanjikuzhi). At Chalakudy and Karuvarakund, plants budded on self-rootstock (24.60 and 19.90) recorded significantly higher number of fruits per m^2 than the plants budded on wild rootstock. Meanwhile at Palakuzhy, just opposite was the trend, plants budded on wild rootstock had significantly higher number of fruits per m^2 (18.60) than plants budded on self-rootstock.

(iv) Number of fruits per tree: Number of fruits per tree also varied significantly from 140 to 885 in nutmeg plants budded on *Myristica beddomei* and 391.50 to 1080.00 in self-rootstock budded plants. Number of fruits per tree was significantly higher in plants budded on self-rootstocks at Chalakudy (1080); Kanjikuzhi (461) ; Karuvarakund (391.50). Meanwhile, at Palakuzhy and Kallurkad, the variation between plants budded on self-rootstock and wild rootstocks for number of fruits per tree was non-significant.

(v) Fresh nut yield per tree (kg/tree): Except Palakuzhy and Kallurkadu, fresh nut yield per tree was significantly higher in plants budded on self-rootstocks; Chalakudy (12.57 kg/tree), Kanjikuzhi (4.99 kg/tree) and Karuvarakund (4.24 kg/tree).

(vi) Dry nut yield per tree (kg/tree): Like fresh nut yield per tree, dry nut yield per tree was also significantly higher in the trees budded on self-rootstock; Chalakudy (9.11 kg/tree), Kanjikuzhi (4.01 kg/tree) and Karuvarakund (3.04 kg/tree).

(vii) Dry kernel yield per tree (kg/tree): Like dry nut yield per tree, dry kernel yield per tree was also significantly higher in the trees budded on self-rootstocks than on the wild rootstock. The highest kernel yield per tree was recorded in trees budded on self-rootstocks at Chalakudy (6.44 kg/tree), Kanjikuzhi (3.02 kg/ tree) and Karuvarakund (2.11 kg/tree) when compared to the trees budded on wild rootstock

(viii) Fresh mace yield per tree (kg/tree): Fresh mace yield per tree was significantly higher in the trees budded on self-rootstocks at Chalakudy (1.52 kg/tree) and Kanjikuzhi (1.45 kg/ tree), whereas at Palakuzhy, trees budded on wild rootstock for fresh mace yield per tree (1.95 kg/tree) recorded significantly higher values.

(ix) Dry mace yield per tree (kg/tree): Unlike fresh mace yield per tree, dry mace yield per tree was significantly higher in the trees budded on self-rootstock only at one location Kanjikuzhi (0.95 kg/tree). However, at rest of the four locations, the plants budded on self-rootstock and wild rootstock was not significantly different for dry mace yield per tree.

The analysis of variance of the pooled data for the two consecutive years across the locations is presented in Table 4. The data indicates that out of thirteen quantitative morphological and yield characteristics studied, eleven characteristics were significantly different and recorded higher values for trees budded on self-rootstock. All the yield characteristics were significantly higher in the trees budded on self-rootstock like the fruit set percentage (29.58%), number of fruits per m^2 (19.86), number of fruits per tree (599.50). Similarly high fresh nut (6.93kg/ tree) and mace yield per tree (5.19 kg/tree); dry nut (1.92 kg/ tree) and mace yield per tree (1.04 kg/ tree); and dry kernel yield per tree (3.84 kg/tree) were obtained on the trees budded on self-rootstock than the wild rootstock.

Hence, it is evident that, the performance of nutmeg budded on *Myristica fragrans* was superior when compared to the ones budded on *Myristica beddomei.* The yield produced by trees are controlled by many factors although choice of rootstock is an important component in this control. Studies on rootstock-scion interaction in clove conducted at IISR (2007) reported that rootstock had a definite influence on the scion in terms of the growth in clove. Dwarfness of clove was reversed when it was grafted on normal clove (Mathew *et al.*, 2006). Rootstock and scion combinations have variable influence on tree growth and productivity. Hrotko *et al.* (2001) evaluated the influence of rootstock on plum trees of cultivar Stanley and reported that yield efficiency varied according to the vigour of rootstock used but fruit weight on trees planted on different rootstocks was not significantly influenced.

Successful vegetative propagation of *Garcinia xanthochymus* on its rootstock through softwood grafting was reported by researchers from IISR (2007), which induced precocity in bearing together with dwarf stature. Nursery performance studies of different citrus rootstock by Nasir *et al.* (2011) reported that maximum plant height, stem thickness, canopy spread and size was recorded in Kinnow plants grafted on rough lemon followed by Rangapur lime. Pal *et al.* (2017) studied the influence of the rootstock in cherry and reported that best cumulative yield in value was obtained in cherry cultivars grafted on 'Gisela 5' rootstock (23.20 kg/tree) followed by cherry trees are grafted on Mahaleb (13.10 kg/trees). The strong influence of the rootstock Gisela 5 on the yielding precocity in cherry was suggested by Stehr (2008).

The leading horticultural property controlled by the rootstock is to control yield. Yield is controlled by the rootstock in various perennial species including the rubber tree (Cardinal *et al.,* 2007), mango (Smith *et al.*, 2003) and apricot (Hernandez *et al.,* 2010). Acid lime budded on rough lemon found 70% improvement in yield as compared to those budded on troyer citrange, rangapur lime or its own rootstock. Sweet orange var Sathgudi recorded higher yield when budded on Kichili rootstock than others. The scion- stock relationship is very important for optimal growth, nutrient uptake, flowering, fruiting and quality. This increased yield could be due to several factors: precocity, flower number, fruit set and biennial bearing. Nutrient levels, water content and hormones also control the photosynthetic capacity and subsequently the growth rate of the composite plant (Koepke and Dhingra 2013). Scion-stock relationships are important from a horticultural point of view because they provide a basis for selecting the best combination (bud/graft) for particular environmental conditions (Jayswal and Lal 2020). Here, in the present study, the performance of nutmeg trees budded on self as well as wild rootstock was assessed at high, medium and low altitudes. But irrespective of the altitude, trees on *Myristica fragrans* turned out as superior performer.

Table 4: Overall comparison of nutmeg trees budded on wild and self-rootstock irrespective of location.

Sr. No.	Parameter	Wild rootstock	Self-rootstock
1.	Plant height(m)	5.07	4.93
2.	Girth at 140cm height(cm)	40.86	43.18*
3.	Canopy spread N-S(m)	5.42	5.72*
4.	Canopy spread E-W(m)	5.48	5.91*
5.	Number of fruit bearing branches	52.92	50.22
6.	Fruit set percentage (%)	24.92	29.58*
7.	Number of fruits / m^2	16.34	19.86*
8.	Number of fruits per tree	449	599.50*
9.	Fresh nut yield per tree (kg $tree^{-1)}$	5.20	6.93*
10.	Dry nut yield per tree (kg $tree^{-1)}$	3.83	5.19*
11.	Fresh mace yield per tree (kg $tree^{-1)}$	1.49	1.92*
12.	Dry mace yield per tree (kg $tree^{-1)}$	0.79	1.04*
13.	Dry kernel yield per tree (kg $tree^{-1)}$	2.72	3.84*

* indicates 5% level of significance

CONCLUSIONS

This is the first report on comparative evaluation of growth and yield of nutmeg plants budded on self-rootstock as well as wild rootstock. Considering all the growth and yield parameters together, irrespective of location and altitude, plants budded on self-rootstock (*Myristica fragrans*) were superior when compared to the plants budded on wild rootstock (*Myristica beddomei*).

FUTURE SCOPE

Commercial nurseries in South India uses *Myristica beddomei* as rootstock on a large scale as the bud take is more on wild rootstock when compared to *Myristica fragrans*. Findings of the present study throws more evidences on sticking on to *Myristica fragrans* as the ideal rootstock for nutmeg.

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