

Triple-seeds in *Mammea suriga* (Buch.–Ham. Ex Roxb.), an Avenue Tree

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## Short Communication

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## ABSTRACT

Generally, fruits of *Mammea suriga* contain single seed. However, in this paper, we report seed abnormality in this species, where few fruits contained double seeds (0.53%) and one fruit showed triple-seeds. This kind of variation may be useful for tree improvement programme.

*Mammea suriga* Buch.–Ham. ex Roxb. (Family: Clusiaceae) is one of the important aromatic tree resources of the Western Ghats. Due to handsome foliage and sweet scented flowers, this plant is used in avenue planting program. Fresh flowers of the tree are used for worshipping in temples as well as in personal adornment. Dry flowers maintain fragrance for long time; therefore, flowers are used in perfumery industries [1]. Silky red dye extracted from dried flower is used in textile industries. Flower bud have medicinal properties and used as astringent as well as in dyspepsia. Hence, this species is considered as multi-purpose tree species of Western Ghats [2].

Suragi (*Mammea suriga*), is an andro-dioecious tree species and it blooms during hot season and fruit ripens during rainy season. Fruit is dispersed by bat species. Seeds are bold and each fruit contain single seed. It is also reported that some of the fruits of this species have double seeds [2]. Moreover, they have quantified rate of double seeds among different individuals within a population. Interestingly, a fruit containing three seeds was recorded in *M. suriga* (Plate 1); perhaps, this could be the first report on triple seeds in this species.

In order to produce seedlings of *M. suriga* in the forest nursery, seeds were collected from three adult individuals planted along the roadside of Dr. B.S. Konkan Krishi Vidyapeeth, Dapoli during June, 2012. During seed processing, we record fruits containing double and triple seeds in a seedlot. Out of 6021 fruits collected, two fruits have got triple seeds and 32 fruits contained double seeds (Plate 1). The overall contribution of single, double and triple seeds per fruit in a collected seedlot was 99.44, 0.53 and 0.033 per cent, respectively. This abnormality could be due to developmental error occurred during fertilization in the plant system. For raising nursery, fruit containing double and triple seeds may be advantages over single seed during poor seed year. Growth of seedlings derived from these abnormal seeds has been recorded. Result showed that there is little variation in seedling growth among seedlings derived from abnormal seeds (Table1).

Plate 1: Single (normal), double and triplet seeds in *Mammea suriga*



Table 1: Growth performance of single, double and triple seeds in *M. suriga* (45 days old plants)

Growth parameters	Single seed	Double seeds		Triple seeds		
		1 <sup>st</sup> seed	2 <sup>nd</sup> seed	1 <sup>st</sup> seed	2 <sup>nd</sup> seed	3 <sup>rd</sup> seed
Shoot length (cm)	10 cm	11 cm	28.0 cm	5	7	Did not
Root length (cm)	16 cm	11 cm	22.5 cm	11	9	germinate
Collar diameter (mm)	2.76 mm	1.07 mm	2.56 mm	1.44	1.33	

Such kind of seed abnormality has been recorded in *Mimusops elengi*, where number of seeds per fruit varied from one to four. Some of the fruits of *M. elengi* have double seeds and few fruits have got three to four seeds [3]. Records of abnormality of double seeds have also been recorded in various rare plants species viz., *Garcinia gummi-gutta* [4], *Nothapodytes nimmoniana* [5] and *Vateria indica* [6]. There may be genetic similarity between seeds (double, triple or four) of a single fruit. Therefore, recording of such observation/ abnormality in different plant species may be useful in tree improvement programme. Further, these records may also be useful in documentation while preparing monograph of species.

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