

Studies on The Normal Flowers of Banana

(*Musa sapidissima* Jacob)

By

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Taking the malformed structure found in the staminate flowers of the majority of bananas as the normal one, an early Botanist, in the absence of the usual sepals and petals, named the large structure found in the place of the sepal as Perigonium. It has three major lobes alternating with two minor ones at the sinuses. He named the structure found in the place of the petal as Scale.

Many years later, Dr. E. E. Cheesman also taking the above mentioned malformed structure as the normal part of staminate flowers of bananas, changed the name of those structures as Compound tepal and Free tepal and they are in vogue at present. Simmonds (1959) has given prominence to this in his book, "Bananas".

Cherian Jacob (1952) has described in detail the parts of normal staminate flowers of bananas and he too had then followed the names given by the early Botanist in his book "Madras Bananas" page 17, Figure 3 there is a normal staminate flower of a banana having three similar sepals, each one and a half inches long, broadest towards the base and tapering to a point. The three petals are also similar and about an inch long, boat shaped and abruptly narrowed to a point and hyaline as rarely found in the banana variety *Nendran* (French plantain). The colour of the sepal is purplish and the lobes are yellowish.

But in some varieties of bananas there may be only one normal sepal and two normal petals of the size, shape and colour as found in the *Nendran* variety while in others two of the sepals and one of the petals are fused into a compound sepal having two major lobes representing the two sepals and a minor lobe at the sinus representing the third petal as in the varieties *Ney poovan*, *Pacha naadan*, *Adakakunnan*, *Venneettukunnan* etc., (Fig. 2.)

In the large majority of banana varieties there is only one very large and broad compound sepal, prominently two keeled especially on the anterior rows of the fascicles of flowers, the two sides of it are slightly jointed towards the base enclosing the other parts of the flower. It has generally three major lobes alternating with two minor ones found slightly below the sinuses. The three major lobes represent the three sepals and the two minor lobes found at the sinuses represent two of the petals and the normal third petals is found opposite to the large sepal (Fig. 1). Sometimes one or both the minor lobes found at the sinus or sinuses representing the petal or petals are found attached very much below the sinus or sinuses on the inner side of the sepal as in the case of the banana varieties *Chakarakeli*, *Venneettukunnan* etc. (Fig. 4).

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Received on 23-2-1967.

Stamens are borne on rudimentary ovaries and are twice the number of sepals or petals; but only five stamens are generally developed. Six stamens are found in the variety *Nendran* (Fig. 7) but the sixth stamen is sometimes rudimentary in this variety and in the other varieties like *Myndoli*, *Kaio* of Honolulu etc. (Fig. 6). Rarely in some varieties like *Venneettukunna* there may be only three stamens with two rudimentary ones or four stamens with one rudimentary stamen (Fig. 5). The colour of the stamen is usually whitish but in *Kaali* group of banana varieties the stamens are poorly developed and the anthers are dark in colour and irregularly bent.

Rudimentary ovary is inferior, generally greenish white, three celled and of five sides of unequal width or nearly terete. It is deciduous in most banana varieties; persistent in varieties like *Nendran*, *Chingam*, *Dwarf cavendish* (*Pacha vazhai*), *Nendra padathy*, *Kullen* etc. and semipersistent in *Giant Governor*; *Chinali*; *Manniella chingan* etc. Rudimentary style is stiff, erect, terete, whitish and shorter than the stamens. Generally such style in staminate flowers dries up and falls off when the fruits begin to mature. But in varieties like *Kadali*, *Suriakadali*, *Chakarakeli* etc. the basal portion of the style is accrescent to an inch in length and remains whitish till the fruits ripen.

Revised names for the parts of a staminate flower of bananas. If the terms Perigonium and Scale or Compound tepal and free tepal are used for the parts of the staminate flowers of bananas, what is the status of the staminate flowers found in the *Nendran* variety of banana having three similar, one and a half inches long, free sepals and also having three similar, free, an inch long, boat shaped, abruptly narrowed to a point and hyaline petals?

It is also found that the staminate flowers in some banana varieties have one free and one and a half inches long sepal and two of the three petals are also free and of the same size, shape and colour as in the normal staminate flower of the *Nendran* variety. The other two sepals and a petal are fused into a large compound sepal having two major lobes representing the two sepals and a minor lobe at the sinus representing the third petal as found in the banana varieties *Ney poovan*, *Pacha naudan*, *Adakakunna*, *Venneettukunna* etc.

But in the majority of banana varieties there is only one normal petal which in size, shape and colour resembles that of the normal staminate flower found in the *Nendran* variety and all the sepals and two of the petals are fused into a large compound sepal having three major lobes representing the three sepals and two minor lobes at the sinuses representing the two missing petals. The following, therefore, is the correct description of the staminate flower of a banana:— sepals 3, petals 3, stamens 6 as found in the *Nendran* variety of banana.

Therefore, the terms *Sepal* and *Petal* for Perigonium and Scale or Compound Tepal and Free Tepal are only appropriate and to be used.

