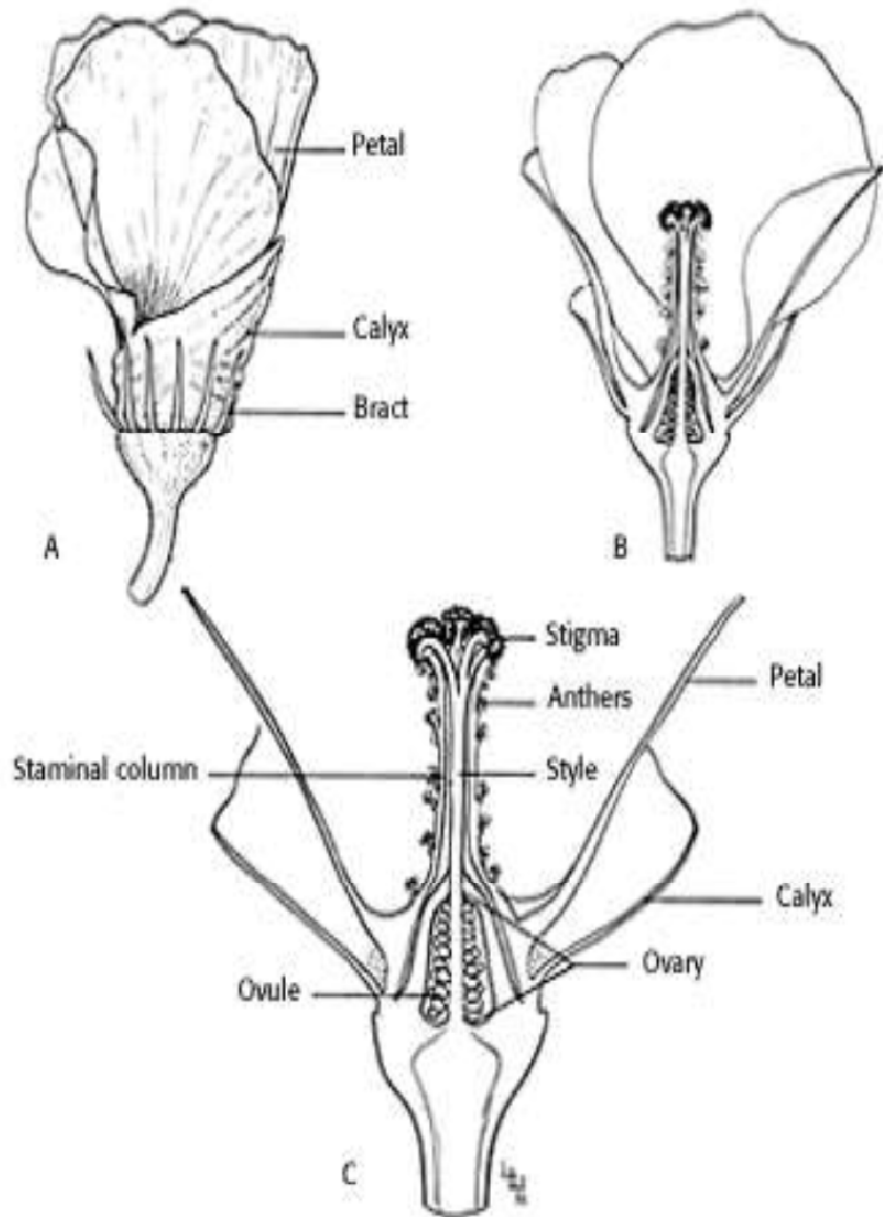


Flower structure of okra





Arka Anamika (♀)



Arka Abhay (♂)

Plate 1(a): Morphogenetic characters of bhendi hybrid parents

Plate 1(d): Morphogenetic characters of bhendi hybrid parents



Arka Anamika (♀)



Arka Abhay (♂)

Plate 1(b): Morphogenetic characters of bhendi hybrid parents

Plate 1(e): Morphogenetic characters of bhendi hybrid parents



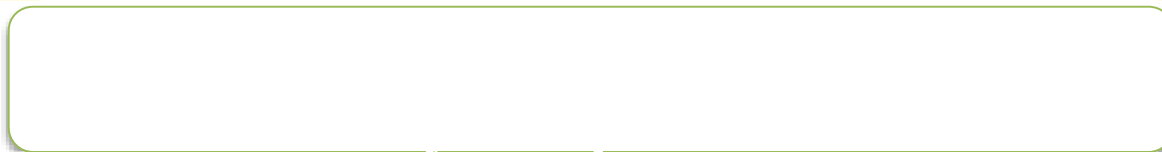
Arka Anamika (♀)



Arka Abhay (♂)

Plate 1(c): Morphogenetic characters of bhendi hybrid parents

Plate 1(f): Morphogenetic characters of bhendi hybrid parents



Hand emasulation and Hand pollination

➤ Materials required for emasulation and pollination

For emasulation of flower bud, forceps and needles are required, while plastic container, pollen ring, scissors and brush are needed for pollen extraction from anthers and for pollination work.

➤ Hand emasulation

The removal of androecium (stamens) from bisexual flower is called as emasulation.

The buds opened next day, were selected in female parent and emasulation was carried out by removing the androecium along with the corolla. These emasculated buds were covered with butter paper pockets to avoid cross pollination and also for easy identification of emasculated flower for pollination. The emasulation was carried out daily from 2-00 to 6-00 pm (Plate 3). Care was also taken to remove the unemasculated flowers as per treatment and during



Selection of proper size bud

Plate 3(a): Steps involved in emasulation in bhendi hybrid seed production



Emasulation of flower bud

Plate 3(b): Steps involved in emasulation in bhendi hybrid seed production



Emasculated bud

Plate 3(c): Steps involved in emasculation in bhendi hybrid seed production



Bagging of emasculated bud

Plate 3(d): Steps involved in emasculation in bhendi hybrid seed production

Pollination

The transfer of pollen from male parent to female parent is called as pollination. The just opened flowers were picked from the male parent in a separate brown paper pockets and used for crossing of emasculated flowers.

One male flower was used to pollinate four, six, eight and ten female emasculated buds as per the treatments and after crossing different colour thread was tied to the pedicel of the crossed buds for easy identification of the crossed bud. Pollination was carried out daily between 8-00 am to 4-00 pm depending upon the treatments (Plate 4). The crossing was carried out for a period of eight weeks from the initiation of flowering. The buds and flowers that appeared subsequently after the stopping of crossing programme were manually removed to facilitate better development of the crossed fruits and to avoid the selfed seeds in the hybrid.



Pollination of emasculated bud

Plate 4 (a) : Steps involved in pollination



Pollinated flower bud

Plate 4 (b) : Steps involved in pollination



Red thread tied to the crossed flower bud

Plate 4 (c) : Steps involved in pollination

Some okra hybrid variety

➤ **Taja:-**

Taja offers fruits of exceptional quality with good yield. The first picking starts from 45 – 47 days after sowing and the fruits are slender, shiny dark green in colour. The fruits also keep well for 12-15 days. The hybrid is moderately tolerant to Yellow Vein Mosaic Virus.



➤ **Nazuk:-**

Nazuk is a high yielding hybrid with moderate tolerance to Yellow Vein Mosaic Virus. The first picking starts from 45-50 days and the fruits are tender, dark green, 12 – 14 cm long.



➤ **Purna:-**

Purna is highly tolerant to Yellow Vein Mosaic Virus(YVMV) disease. The hybrid is a high yielder with shorter internodes and produces long (13 cm), green, five ribbed fruits and is suitable for cultivation across the country.



➤ **Jaya:-**

Jaya is a high yielding, tall vigorous hybrid. The fruits are medium long green, tender with five ridges. It is tolerant to Yellow Vein Mosaic Virus(YVMV) and can be grown all over India.



➤ **Subha:-**

An early high yielding hybrid, with tall plants, medium branching and narrow leaves. The first fruit matures in 38 – 40 days. The fruit are dark green, tender, of medium girth, 18 – 20 cm in length, five ribbed, smooth and with good keeping quality. This hybrid is tolerant to Yellow Vein Mosaic Virus (YVMV) disease.

➤ **Arka Anamika:-**

A Government Notified Variety and is recommended for all India cultivation. The fruits are 15 – 20 cm long, lush green, cylindrical tapering with light reddish shades, coarse surface with 5 ridges. It is a good yielder.



➤ **Dhaanya Selection Saloni:-**

Saloni is a high yielding, moderately tolerant to yellow vein mosaic virus variety and is recommended for all India cultivation. The fruits are long, tender, and green with five ridges.

➤ **Hybrids:**CO2 (AE 180XPUSASEWANI)CO3 (PRABHARIKRANTI X MDU1),Mahyco hybrid, Shoba and Prabhanikranti.

➤ **Varieties :** Co.1, MDU.1, Parbhani Kranti, Arka Anamika, Pusa A-4, Pusa Sawani