**COTTON**

*Gossipium hirsutum*

**Equipment**

Forceps, pointed needle, razor, camel hair brush, soda straw tube, copper Wire #30, wax butter paper bag (3”x2"), needle and thread, methylated spirit. Tag and lead pencil, acetone or any adhesive material.

**Procedure**

Cotton is an often cross pollinated crop. The first flower to open is low on the plant and near the main axis, the succession being centrifugal and acropetal. Most of the flowers complete anthesis between 7-10 a.m. although there is a great variation in flowering time.

**Selfing**

You can self the flower in the following different ways.

1. Place a rubber band around the unopened large size floral bud of a desirable plant in the evening to prevent the corolla from opening
2. Tie the bud with copper wire number 30 below the flower tip taking care that the pistil is not damaged
3. Stitch the unopened floral bud below the top of the flower with a needle and thread.
4. Loop the thread twice around the unopened bud and complete the operation by passing the needle through the bud in the direction opposite to the first.
5. Place the butter paper bag on the unopened floral bud and tie the loose end by means of a soft thread
6. Apply acetone or any other adhesive materiel like nail polish at the apex of the unopened floral bud.

**Crossing**

**Emasculation**

1. In the evening select e desirable floral bud and cut the corolla by giving e circumcision around the floral bud and near the basal side
2. Remove the stamen (male part) gently with a forceps
3. Slide a wax based soda straw tube on pistil after emasculation
4. Plug the open end of the tube with surgical cotton or turn it back
5. You can cover the emasculated bud with a butter paper bag also

**Pollination**

1. ln the evening bag the unopened desirable flowers of the male parent before anthesis.
2. Next morning collect the pollen grains in the Petri dish.
3. Dust the pollen grains with the help of a fine camel hair brush on the stigma of the emasculated floral bud after removing the soda straw tube or butter paper bag as the case may be.
4. Pollinate between 8-10 a.m.
5. Put the respective bag or the soda straw tube after Pollination to protect it from, stray pollen contamination
6. Sterilize your hands and equipment with Methylated spirit after every pollination.

**Labelling**

Tag the plant, indicating the name of the cross, date of pollination and your signature. Write the-female parent first and then the name of the pollen parent (male). Always use lead Pencil as it is water proof and will, not be damaged during rains or due to dew