

EMASCULATION IN CHILLIES (*CAPSICUM* GENUS)

EMASCULATION, the first and the most important operation, to be attended to during the process of hybridization entails a good deal of care and precaution on the part of a plant-breeder. More often it is done by completely removing the stamens, one by one, by forceps or by a pair of scissors, before the anthers begin to burst and just at the time the flower begins to open. This method of removing the anthers takes some time and often, in spite of the several precautions taken, there may be a likelihood of one or more stamens being left in the flower, specially in those where a large number of stamens have to be removed.

In chillies the stamens are all epipetalous, and the corolla is so brittle that the tubular corolla can easily be removed without any injury being caused either to the ovary, the style or the stigma. When the fully matured bud, which is expected to open the next day, is split at the corolla to remove the anthers one by one, it was found that in some cases the tubular corolla, being brittle fell off easily, leaving intact the gynæcium. This led us to try if the epipetalous corolla tube (Fig. 2) cannot be removed wholesale instead of attempting to remove the stamens one by one.

The pedicel of the flower is held, in between the thumb and the fore-finger of the left hand, with a careful and firm grip of the calyx enclosing the ovary, and with the right-hand thumb and forefinger the tubular corolla is cautiously removed without applying much pressure lest any damage should be done to the style and the stigma (Fig. 1). It is quite gratifying to note that this method of emasculation gave as much percentage of setting as the other (removal of anthers by forceps, etc.) with the one great advantage of saving good amount of time.

Detailed data regarding the number of flowers that could be operated in a fixed time by both the methods and the percentages of setting is being collected. At any rate, that

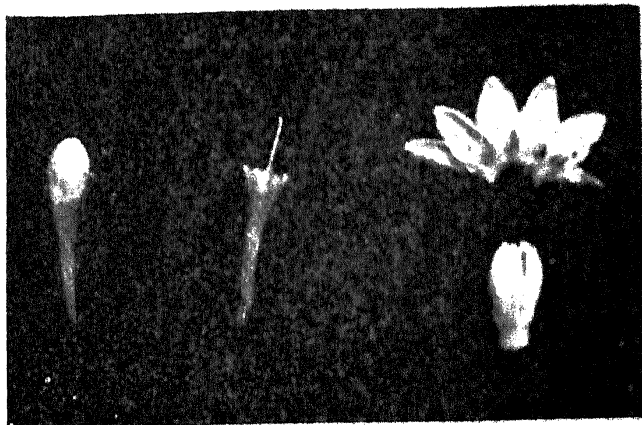


FIG. 1

the process of removing epipetalous corolla tube is found to be much quicker and easier than removing the stamens one by one, is established beyond doubt.



FIG. 2

It may not be out of place to mention here, that even illiterate coolies, specially women with delicate hands, were able to do this operation with the greatest amount of confidence and success giving a very good percentage of setting. Preliminary trials are being conducted with tobacco flowers also where the results are quite encouraging and the same may be found suitable for most other epipetalous flowers.

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