B-14 Pollination of vanilla flowers: an evaluation of three artificial methods

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Vanilla, an important and popular flavouring material and spice,is the fully grown processed fruit of the orchid, *Vanilla fragrance* (Salisb.) Ames. At present there is an increasing demand for cultivation of vanilla in the Mid-country wet-zone areas of Sri Lanka.

Vanilla flower is arranged in such a way that artificial pollination is essential to obtain a considerable amount of fruits. This experiment was carried out in a farmer's field at Matale, to select an efficient and easy method for artificial pollination.

Three different pollination techniques were carried out during the main flowering season (April-May) in 1995. Treatments were: T1-Lifting of the flap(rostellum) between stigma and anthers by a needle and applying a gentle press on the stamen head; T2- Removal of the rostellum by a pair of forceps; T3- Collection of pollen with a flat needle and placing them on stigma. Actual pollination time required for each method was recorded per flower. The percentage success of pollination was recorded on the basis of bean count (pod setting) taken at 5 days after pollination for each method.

The time taken for pollination of a flower varied significantly among the treatments (p 0.05) and the maximum time recorded (15sec/flower) was in T3. The pollination times of T1 and T2 were 8.5 and 9.0 sec/flower respectively. Significantly low success (51%) was recorded in the method of removal of rostellum (T2). The success of T1 was 85%.

In conclusion, lifting of the rostellum by a needle and applying a gentle press on the stamen head (T1) was found to be the easiest and most successful method for artificial pollination of Vanilla flowers.