

release

pollen

**Outbreeding Devices** : Majority of flowering plants produce hermaphrodite flowers and pollen grains are likely to come in contact with the stigma of the same flower. Continued self-pollination result in \_\_\_\_\_ . Flowering plants have developed many devices to discourage self-pollination and to encourage cross-pollination. In some species, pollen \_\_\_\_\_ and stigma receptivity are not synchronised. Either the pollen is released before the stigma becomes receptive or stigma becomes receptive much before the release of pollen. In some other species, the anther and stigma are placed at different positions so that the \_\_\_\_\_ cannot come in contact with the stigma of the same flower. Both these devices prevent autogamy. The third device to prevent inbreeding is \_\_\_\_\_. This is a genetic mechanism and prevents self-pollen (from the same flower or other flowers of the same plant) from fertilising the ovules by inhibiting pollen germination or pollen tube growth in the pistil. Another device to prevent self-pollination is the production of unisexual flowers. If both male and female flowers are present on the same plant such as castor and maize (monoecious), it prevents autogamy but not \_\_\_\_\_. In several species such as \_\_\_\_\_, male and female flowers are present on different plants, that is each plant is either male or female (dioecy). This condition prevents both autogamy and geitonogamy.

Papaya

Geitonogamy