

Why Manage Pollination?

In most fruits, vegetables, forages, and oilseeds, insects are either required for pollination to take place at all, or they are necessary to obtain the higher yields and quality that come from cross-pollination.

Unfertilized ovules may lead to lower yields and/or small or misshapen fruit. Most plants produce more ovules than they can support to maturity, and so some seeds may abort naturally. However, it is still important to ensure that the remaining fruit is fully pollinated, to ensure size and symmetry. Developing seeds stimulate the growth of fruit tissue. More seeds result in more tissue, and an even distribution of seeds within the fruit ensures symmetrical growth.

Many plants will selectively abort self-fertilized seeds, leading to reduced yields in crops where insects have not moved enough pollen between plants.



Example of a poorly pollinated cucumber (photo courtesy of <u>Missouri Botanical Gardens</u>)

Cross-pollination can improve crop **quality** as well as quantity. For example, seeds from cross-pollinated oilseed plants can have higher oil content than those from self-pollinated plants. In crops that are naturally self-fertile or those that have been bred to be self-fertile, insects can still facilitate cross-pollination, thereby improving overall yield in these crops as well.



Fully pollinated fruits and vegetables are larger and more symmetrical than their under-pollinated counterparts







