Influence of insect pollination on quantity, quality of the crops and economic efficacy

- $\mathbf{V_{h.i} = V \times D \times P}$ Where:
- $V_{h.i}$: annual value of the crop attributable to honeybee activity (or other insects)
- V : annual value of the crop
- D : dependency on insect pollination
- P : proportion of effective insect pollinator of the crop that are honeybees (or other pollinating insects).

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- The dependency factor D was calculated by the following formula:
- **$D = (Y_o - Y_c)/Y_o$** Where:
- Y_o : yield from open-pollinated flowers (experiment group)
- Y_c : yield from flowers in cages that exclude insect visitation (control group).

Example: cucumber

- Yield from open-pollinated flowers (experiment group - Y_0): 100kg
- Yield from flowers in cages that exclude insect visitation (control group - Y_c): 10kg
- $D = (Y_o - Y_c)/Y_o$
- $= (100kg - 10kg)/100kg$
- $= 0.9$

Example: cucumber

Dependeance on insects:	0.9
Honeybee proportion:	0.7
Dependance on honeybee (%):	63
Production value ($):	10,000
Honeybee contribution	6,300