Wild flowers and Beneficial Insects

Wild flower plots near agricultural fields can have two important benefits: they are known to be refuges for beneficial insects (pollinators, natural enemies) and they are known to increase insect diversity in the area, providing for increased ecosystem stability. It is hypothesized that larger flower plots will have a greater diversity of beneficial insects because larger flower plots also have a larger diversity of plants. Scientists tested this hypothesis by planting wild flower plots of three different sizes (1X1m - small, 5X5m - medium, and 10X10m large) and sampled the insect community living in these plots. The scientists planted 5 plots of each size in randomly determined locations around an agricultural field, and after a month (to allow insects to colonize them) vacuum sampled the plots to collect all the insects present. In order to determine how many insects would be present if no wild flower plot were present, mowed grass (which normally surrounds this agricultural field) is also vacuum sampled. After the insects from all plots have been counted, the diversity is determined using the Shannon diversity index ($H$). Then, the scientists perform a correlation of the size of flower plot with the diversity of insects.

(From Blaauw and Isaacs, 2012)