POLLINATOR ATTRACTIVENESS OF FIVE WEEDS

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The number of pollinators in agro-ecosystems worldwide has declined alarmingly in recent decades due to poor agricultural practices such as the intensive use of pesticides and monocultures. Additionally, an increase in agricultural land use has likely accelerated this decline due to the reduction of wild areas where pollinators can feed and shelter. In such scenarios, weeds in agroecosystems may help maintain biodiversity by attracting pollinating insects.

In order to study the attractiveness of some native weeds to pollinators, a two-year trial was set up at Viladecans (Catalonia, Spain) in 2.5 x 2.5 m plots with 3 repetitions. The study involved measuring the attractiveness of five different species which were found to attract pollinators in a previous study (*Sonchus oleraceus*, *Papaver rhoeas*, *Daucus carota*, *Malva sylvestris* and *Convolvulus arvensis*) and a combination of all five in equal percentages. Sampling was carried out with visual observations of insect visits to flowers in each plot, twice a week for 5 minutes in the morning. The observed insects were grouped into seven functional groups: bees, beetles, butterflies and moths, hoverflies, true bugs, wasps and other insects.

There were significant differences between the weeds at the level of attractiveness. *P. rhoeas* and *D. carota* were the weeds that showed the greatest attractiveness to pollinators, although *P. rhoeas* attracted mainly bees and beetles, while *D. carota* attracted bees, beetles, hoverflies and true bugs. The mixture of weeds attracted significant amounts of bees, beetles and true bugs and *C. arvensis* attracted predominantly bees and beetles. *M. sylvestris* and *S. oleraceus* were the species that showed an overall lower attractiveness for pollinators, the later probably due to the fact that its flowers were only open for a very short period each day.

We can conclude that *P. rhoeas* and *D. carota* were the best species for attracting pollinators because they attracted the greatest proportion of bees, which are important pollinators of crops. *D. carota* also attracted the greatest proportion of hoverflies, which are important predators of pests.