Disentangling the effects of host plant quality and plant neighbourhood on parasitoid community composition on ragwort (*Jacobaea vulgaris* L.)?

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Plant nutritional quality directly affects primary consumers such as insect herbivores but plant quality can also affect secondary consumers such as parasitoids. In nature, individual plants are never isolated but coexist and compete with neighbouring plants within plant communities. It is well known that parasitoid community composition differs greatly between plant communities. Studies on the effects of plant community on parasitoid communities typically use a community approach where plant and parasitoid community interactions are determined per area unit. These studies do not provide insight into plant-insect interactions as they occur on individual plants growing within those plant communities. In contrast, studies that focus on the effects of plant quality on performance of parasitoids are typically carried out with isolated plants. Therefore, how host plant quality and the identity of the plant community interactively affect arthropod communities on individual plants remains largely unanswered. We studied parasitoid communities associated to individual ragwort plants (*Jacobaea vulgaris* L.) across a chronosequence of former arable fields in the Netherlands. Plant community composition and ragwort density varied greatly between sites. Moreover, there were more than three fold differences in individual ragwort size and primary and secondary chemistry between fields. I will show how parasitoid community composition responds to host plant quality and plant community characteristics between and within the fields.