

## **Plant-soil feedback interactions of Ragwort along a chronosequence of ex-arable fields**

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Ragwort (*Jacobaea vulgaris*, previous nomenclature *Senecio Jacobaea*), is an early successional plant species whose abundance typically increases during the first years of secondary succession, but this increase is followed by a rapid decline. We hypothesized that this decline is caused by interactions of the plant with soil organisms and with the neighboring plant community. To test this hypothesis we conducted vegetation surveys at a chronosequence of ex-arable fields at a central situated sandy area, the Veluwe, in the Netherlands. The age of these fields ranged from two to 25 years old. In each field we recorded the abundance and size of ragwort plants, recorded which plants surrounded individual ragwort plants, and determined the composition of the soil community underneath the plants. In a greenhouse study we determined plant-soil feedback responses, by growing ragwort, for two growth phases, in sterile soil inoculated with field soil originating from the chronosequence fields. We will show temporal changes in ragwort abundance in the field, and how this is related to plant community dynamics, and to interactions of the plant with the soil community.