

Oviposition preferences of *Diabrotica virgifera virgifera*: Multiple-choice field cage trials

Eiablagepräferenzen von Diabrotica virgifera virgifera: Multiple-choice-Käfigversuche im Feld

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Adults of the maize pest *Diabrotica virgifera virgifera* are known to primarily lay their eggs into the soil of maize fields. This is, because the larvae of this pest are largely restricted in their feeding to maize. In the USA, some populations, however, also lay eggs in non-maize crops where maize is grown the following year which will allow larval development.

Therefore, the oviposition behaviour of *D. virgifera virgifera* adults was studied in large multiple choice field cages at two field sites under European conditions between 2009 and 2011. Between 8 and 22 large gauze cages (ca. 4.5 x 2 x 2 m) were placed into each of the two study fields, each covering three different crops. Totally 10 different crops were used in different combinations. About 50 newly emerged female and 50 male adults were released in each cage (usually in mid-July) of each year. As a result of oviposition of *D. virgifera virgifera* in the different crop habitats within the multiple choice field cages, a new generation of beetles emerged the following year when maize was planted over the entire experimental area. These beetles were captured in separated smaller cages placed over the area of the previous large multiple choice cage. The number of emerging adults largely differed between the previous crops before maize, indicating that oviposition was influenced by the crop habitat. As expected, the largest proportion of oviposition appeared to have happened in maize. To some extent also *Sorghum* (Millet) was more used for oviposition than other crops. Final quantitative analyses are on-going.

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