adulten Parasitoide auf Artebene zu bestimmen. Alle Parasitoiden-Weibchen, die sich unter Laborbedingungen entwickelten, wurden als *T. microgaster* bestimmt. In beiden Versuchsjahren waren die Rübsenpflanzen stärker von den Rapserdflohlarven befallen als die Rapspflanzen; diese Unterschiede waren jedoch nicht in jedem Fall statistisch absicherbar. Zwischen den verschiedenen Rübsensorten traten im Befall durch den Rapserdfloh vielfach keine signifikanten Unterschiede auf. Bei der Sektion der Rapserdflohlarven zeigte sich, dass in einigen Versuchsvarianten mehr als 50 % der Schädlingslarven parasitiert waren. Zwischen den Parasitierungsraten der Larven in den verschiedenen Wirtspflanzenarten bzw. -sorten zeigten sich zum Teil deutliche Unterschiede, die sich jedoch nicht statistisch absichern ließen. Die Ergebnisse bestätigen erneut die große Bedeutung der Schlupfwespen als natürliche Begrenzungsfaktoren von Rapsschädlingen. Die Wahl der Sorte hat aber offenbar nur einen geringen Einfluss auf Stärke der Parasitierung.

Die Förderung des Vorhabens erfolgte aus Mitteln des Bundesministeriums für Ernährung, Landwirtschaft und Verbraucherschutz (BMELV) im Rahmen des Bundesprogramms Ökologischer Landbau und andere Formen nachhaltiger Landwirtschaft (BÖLN).

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Temporal patterns of the abundance of the cabbage root fly

The cabbage root fly *Delia radicum* (Diptera: Anthomyiidae) is a major insect pest in cruciferous crops. Their larvae feed mainly on roots and stems of their host plants, whereas the adult flies are responsible for dispersal and reproduction. However, *D. radicum* is not recognized as insect pest in oilseed rape in Switzerland. Since cultivation of oilseed rape increased considerably from 14'606 ha (1994) to 22'245 ha (2011), the habitat for *D. radicum* increased as well. The aim of our study was to examine the abundance of *D. radicum* in the vegetable *brassica* crops-oilseed rape agroecosystem in the growing season in 2012. Therefore, we monitored flight activity of *D. radicum* in several fields in the canton of Lucerne, Switzerland, using one yellow water trap per field. The distance between the traps ranged from 330m to 1400m. One trap was placed in a field on which vegetable brassica crops had been cultivated and harvested in the previous year. At this site, no host plants were available during wintertime and during flight activity of the first generation of *D. radicum* in spring 2012. Additionally, three traps were placed in fields with winter oilseed rape nearby. In these fields, host plants were available during wintertime and during flight activity of *D. radicum*. The traps were set up on March 26, and emptied weekly. According to previous observation (C. Sauer & R. Total, personal communication) the height of the trap was adjusted weekly to the height of the plant canopy. Captured flies were identified and sexed in the laboratory.

For monitoring oviposition of *D. radicum* in winter oilseed rape, the soil around ten randomly selected plants per field was checked weekly for oviposited eggs.

In the field with vegetable *brassica* crops cultivated in the previous year, the first *D. radicum* flies were captured in the period from 2nd to 10th of April. Determination revealed that *D. radicum* males were captured first. Since no host plants were available nearby, oviposition was not monitored.

Exactly the same situation was found in two winter oilseed rape fields. However, in one winter oilseed rape field, first *D. radicum* flies were captured not earlier than in the period from 10th to 16th of April. Again, determination revealed that *D. radicum* males were captured first. Unfortunately, on one respectively on two dates at the end of April and beginning of May during flight activity of the first generation, the traps in the winter oilseed rape fields were turned over and no results are available for these dates. In oilseed rape, *D. radicum* flies were captured before egg oviposition was observed. This study was conducted to monitor the temporal dynamics of the cabbage root fly in the vegetable brassica crops-oilseed rape agroecosystem. The results show that the time of emergence of *D. radicum* was not influenced by the availability or type of host plants. However, data of captured *D. radicum* flies still have to be analysed to discuss the overwintering success and the initial population size of the first generation in vegetable *brassica* crops and winter oilseed rape. These analyses will give insight, whether winter oilseed rape fields offer an undisturbed overwintering habitat for *D. radicum*, and to which extend agricultural measures like tillage (Valantin-Morison et al., 2007) effect their abundance. To monitor the development of the *D. radicum* population, further neighbouring fields with cultivated host plants will be included into the monitoring during the growing season in 2012. In conclusion, with the increase of the oilseed rape growing area, we suggest that the undisturbed overwintering sites and the infestation level of *D. radicum* are increasing too.

Literatur

VALANTIN-MORISON, M., MEYNARD, J.-M. DORÉ, T., 2007: Effects of crop management and surrounding field environment on insect incidence in organic winter oilseed rape (*Brassica napus* L.). Crop Protection 26: 1108 - 1120.

Experiences in controlling slugs in wheat