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The assessment of pollinating insects biodiversity on oilseed rape plantations in Poland (preliminary study)

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Oilseed rape (*Brassica napus* ssp. *napus*) is the most important oil crop in Poland. The acreage of this crop in Poland oscillate about 1 mln hectares, where winter cv. represent about 98%. The yield of seeds of this crop is about 30% higher after cross pollination of flowers by insects. The most important pollinators are bees (Apoidea).

The aim of the study was to assessment the species composition and abundance of foraging insects on winter oilseed rape plantation in vicinity of Pulawy, central east part of Poland.

The study was performed on three localizations Policzna, Bartodzieje and Osiny with the area of plantations 40, 10 and 80 hectares, respectively. Observations of pollinating insects were done at the beginning, during full and at the end of blooming. They were conducted during nice weather, with temperature at least 21°C, from 9 am to 1 pm, when the activity of all groups of pollinators was the highest. Density of bees was performed by transect method and pollinating insects were registered during walking along the observation plot in size 200 m x 1 m during 20 minutes. Observations were done at margin and central parts of plantations.

It was stated that, among of Apoidea noted on winter oilseed rape in Pulawy vicinity, honey bees (*Apis mellifera*) were dominant (98% of all insects). Solitary bees (*Andrena* sp. mainly) and bumblebees were rarely observed. Among bumblebees *Bombus terrestris*, *B. lapidarius*, *B. lucorum* and *B. pascuorum* were noted. Density of bees on tested plantations varied between 0.7 and 1.4 per 1 m².