

Shift in dominance of two stem weevil species in oilseed rape in northern Serbia

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The population dynamics of the rape stem weevil, *Ceutorhynchus napi* Gyll., and the cabbage stem weevil, *C. pallidactylus* (Marsh.), in northern Serbia vary considerably depending on the production season and locality. The damage these two species cause on oilseed rape depends on various factors, among which mostly on their abundance.



Ceutorhynchus pallidactylus



Ceutorhynchus napi



Moericke dish

The monitoring of these pests was conducted in northern Serbia from 2016 to 2018, in the vicinity of Novi Sad, at Rimski Šančevi (N 45°19'51.03" E 19°50'07.16", 80 m a.s.l.) using yellow water traps (Moericke dishes). Chemical control against stem weevils was performed regularly at the monitored site. Assessments were done every seven days from the beginning of the year until May during three consecutive years.

The highest number of weevil specimens (153) was observed in 2017, while a total of 40 and 34 specimens were collected in 2016 and 2018 respectively (tab. 1). During the monitoring period, 2016 to 2018, the rape stem weevil was more abundant than the cabbage stem weevil (128:99), which is not in accordance with the data obtained for the same site for the 2011-2013 period, when an approximately equal species proportion was recorded. The sex ratio for both stem weevil species was approximately 1:1. The first adult specimens of rape and cabbage stem weevils were trapped at the beginning of March in 2016, in the last week of February in 2017. In 2018 the first adults of the cabbage stem weevil were collected on the 12th of January and on the 12th of February for the rape stem weevil.

Table 1. Number of *Ceutorhynchus pallidactylus* and *C. napi* specimens collected in Moericke dishes

Locality		Rimski Šančevi					
Year		2011	2012	2013	2016	2017	2018
<i>C. pallidactylus</i>	♂	9	4	90	12	35	5
	♀	17	14	74	13	27	7
Sum by species		26	18	164	25	62	12
<i>C. napi</i>	♂	14	14	87	9	46	8
	♀	9	15	69	6	45	14
Sum by species		23	29	156	15	91	22

During the monitoring period (2016-2018), although the total number of collected specimens was not high, it was observed that the rape stem weevil was more abundant than the cabbage stem weevil (1.29:1). The likely dominance of the rape stem weevil has been known for the area about 100 km north of the experimental site but not for this locality. It seems plausible to assume that a shift in species dominance is occurring, however this idea should be verified. A significant influence of weather conditions on the beginning of the early year activity of both species and even their abundance is obvious.