Click beetles - *Agriotes sordidus* Illiger / *A. rufipalpis* Brullé

Since the pheromone composition of the two species is identical, we discuss both species on one sheet. The body and the elytrae of both species are shiny black. *A. rufipalpis* is smaller, the body length is 7-10 mm. *A. sordidus* is much larger, 9-12 mm. Species identification of click beetles needs some expertize and a binocular microscope, or at least a good hand magnifier.

Host plants of the larva include maize, cereals, sunflower, sugarbeet, potatoes, other grasses, and also many other plants, i.e. tomatoes.

The larvae feed on the roots. The damage is caused by the larvae, the wireworms, which eat up hatching seeds and roots inside the soil. Damages are variable depending on the plant species attacked and the type of soil. Indicators can be of imprefect hatching of seedlings (maize), damaged hatchlings and roots, yellow colouring of the plant parts above ground. *A. sordidus* is reported to cause significant damages first of all in Italy and southern France. *A. rufipalpis* appears to be widespread in the eastern Mediterranean and Central Europe.

Pheromone traps should be placed at the soil. Usual beginning of trapping for *A. sordidus* in Italy (Veneto region) and for *A. rufipalpis* in Hungary is end of April.

Selectivity of the CSALOMON® pheromone trap: *A. sordidus* and *A. rufipalpis* are attracted equally well to the same pheromone bait composition. Usually only one of the species is present in a given geographical area. In tests conducted at several sites in Europe some specimens of *A. gallicus* were attracted in Switzerland and of *Cidnopus pilosus* in Bulgaria into traps baited with the *A. sordidus / rufipalpis* pheromone bait.

A CSALOMON® pheromone trap starts slowly to decrease its attractive activity after 3-4 weeks of field exposure (depending on actual weather conditions).

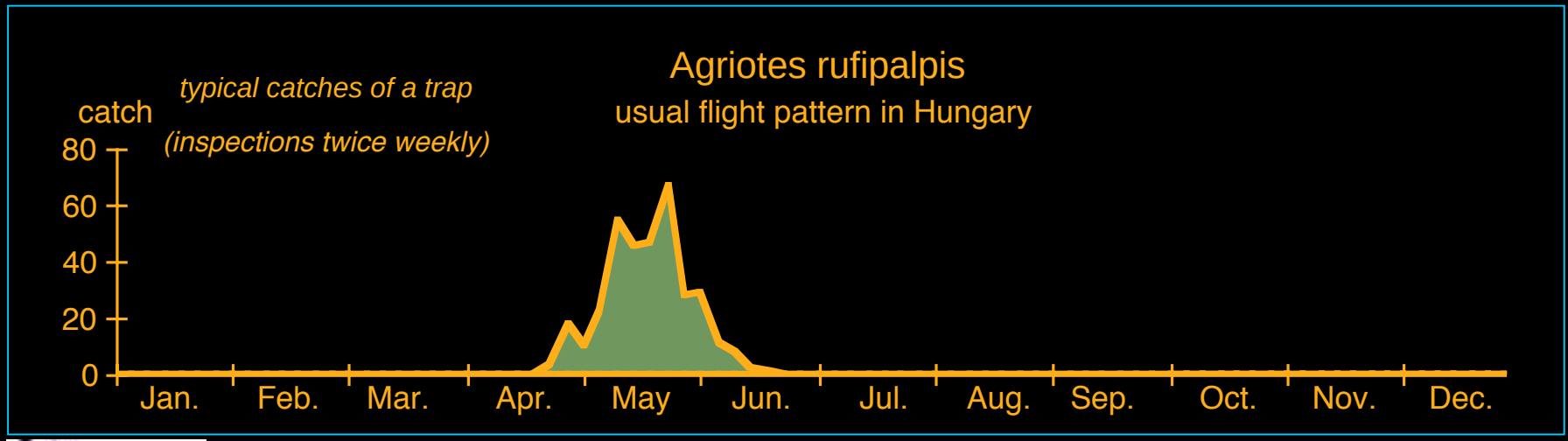
After this period it is advisable to exchange the bait to a new one. BE SURE TO USE THE SAME BAIT AS BEFORE IN THE SAME TRAP; mixing baits for different species may hamper activity seriously!

The larva and its damage, which should be averted

Control of wireworms should be based on reliable forecasting. Application of pheromone traps is much easier and simpler that other sampling methods utilized before (i.e. soil sampling, etc.) Pheromone traps detect the occurrence of the pest very sensitively, so that infestation centers can be "mapped" and treated by insecticide easily.

The non-sticky trap types are capable of catching very large numbers of beetles without being saturated. According to experience in Italy on the closely related *A. ustulatus*, if the average catch per trap does not exceed 150-200 specimens per year, damage is highly improbable on the given field[1]. In case of higher captures, it is advisable to perform larval sampling (soil cores) for more accurate estimation of population levels. This may be performed through agrotechnical means, crop rotation or in more severe cases by soil insecticides[2]. More accurate establishment of correlations between trap captures and larval density in different cultures are underway (Lorenzo Furlan, pers. comm.)

[1] *Furlan, L. et al., ATTI Giorn.Fitopat. 1:133-140, 1996;* [2]*Jermy T, Balázs K. (eds..) A növényvédelmi állattan kézikönyve. Akadémiai Kiadó, Budapest, 1990;* [3] *Tóth M., Furlan, L. Conference of IOBC/WPRS – WG Entomopathogens and Entomoparasitic Nematodes (Innsbruck, Austria, 11-13 October 2004)*



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or <h2371tot@ella.hu>; internet: <http://www.julia-nki.hu/traps/>.

So it looks when caught in the CSALOMON® Yf trap!

Photo: Tóth M.

Click beetles caught in traps with *A. sordidus / rufipalpis* bait (1998-2004)

(after Tóth & Furlan, 2005, IOBC/wprs Bull., 28:133-142; Furlan & Tóth, 2007, IOBC/wprs Bull., 30:19-25)