

Pyrethroids resistance in French cabbage stem flea beetle (*Psylliodes chrysocephala*) and rape winter stem weevil (*Ceutorhynchus picitarsis*) populations and their management.

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Abstract: Cabbage stem flea beetle and rape winter stem weevil are two major pests for winter oilseed rape (WOSR) in France. Since 2009/2010, infestations have become very important in some French areas and despite repeated treatments, the pest control is not sufficient. The phenomenon has increased year by year. Terres Inovia and its partners, through the AFPP (French Association for Plant Protection) group “Insect resistance”, have confirmed that populations of these two pests are resistant to pyrethroids and that several mechanisms are involved. For cabbage stem flea beetle, knock-down resistance (kdr) is well spread in the territory. Super-knock down resistance (skdr) is present in the East of France, mainly in Yonne but the area is increasing. For rape winter stem weevil, kdr was found but no skdr. For these two species others resistance mechanisms are involved: metabolic-based resistance were found. Kdr, skdr and metabolic based resistance seem to confer different level of resistance in the field.

More than ever, the management of cabbage stem flea beetle and rape winter stem weevil cannot **rely** only on insecticides. Agronomical practices are the best way to reduce their harmfulness.

Key words : *Psylliodes chrysocephala*, *Ceutorhynchus picitarsis*, resistance, pyrethroids agronomical practices