

# CRITICAL ASPECTS OF DEVELOPING INTEGRATED PEST MANAGEMENT TO MANAGE CEREAL LEAF BEETLE *OULEMA MELANOPUS* (L) – A LITERATURE REVIEW

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The cereal leaf beetle (CLB), *Oulema melanopus* (L.) (Coleoptera: Chrysomelidae) is an Eurasian pest damaging a range of cereal crops including wheat, oat, and barley. Management of this pest and control intervention decision require information on the temporal and spatial dynamics of the population.

As for the temporal aspect, *O. melanopus* population densities have two distinct peaks. The first peak of adult occurrence is in April corresponds to the number of insects emerging from overwintering sites. The second peak of adults at the beginning of May resulted from the development of eggs laid on cereal crops and other grass plants in the spring.

As for the spatial aspect, both inter- and intrafield heterogeneity are known in the population of *O. melanopus* in different life stages. Adults have a high aggregation rates at field edges of adjacent habitats. However, aggregation patterns of eggs, larvae, and adults at larger field scales, does not have an edge effects and indicated colonization of interior field.

The most important mortality factors in CLB populations; competition among individuals, the availability of predators and parasites, which is affected by the density of *O. melanopus*, and plant morphology vis-à-vis different cereal crop species. Moreover, abiotic environmental factors such as wind, temperature and humidity.

Our presentation we will give information about CLB behavior, population dynamics, spatio-temporal distribution and how it affects the distribution of natural enemies based on literature review. These information may contribute to the development of a successful integrated pest management protocol, to meet today's IPM requirements.