

## SUSTAINABLE MANAGEMENT OF *MUSCA DOMESTICA* IN LIVESTOCK FARMS WITH PUPAL PARASITOIDS

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**Abstract** One of the biggest issues which can be found in livestock farms is related to the massive presence of infesting Diptera that causes health problems, disorder and performance loss. Knowing the flies behavior and their biological cycle is fundamental in order to be able to contrast them. *Musca domestica* represents the fly for excellence. Today, in order to manage flies population, there are three possible ways: a) use of synthetic products, b) use of useful insects and physical-mechanical methods of struggle, c) integration of the two methods. The distribution of *Muscidifurax raptor* and *Spalangia cameroni* as natural antagonists reported positive results in farms which follow an integrated biological program. We report below some aspects to be considered if you want to perform a control with biological method. Strength points in the use of parasitoids: Less environmental impact with respect to the use of synthetic products, Increase of indigenous parasitoids populations, No accidental contamination of the product, No return time for the agricultural worker, Admitted in the biological production systems, Distribution allowed also with adverse weather, No genetic resistances. Weakness points and precautions in the use of parasitoids: The pests not 100% eliminated, The biological fight has success times longer than chemical products, The use of synthetic products is no allowed in the area where parasitoids are distributed, The distribution of parasitoids must be targeted in defined points during the site inspection phase, The litter must have particular conditions in order to promote the parasitoid development, Is important to synchronize the parasitoid distribution with the actions related to the removing of the litter.

**Key words** Flies, parasitoid, integrated pest management, IPM, environment