Combining EM/EM5 and Parasitoids in the Biocontrol of Flies in Confined Animal Production

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Abstract: House flies are arthropods that breed in the manure, and increases in poultry houses and dairies. They irritate the animals and people on these premises and are potential vectors of a number of serious diseases. The Stable Fly sucks blood of cows and horses, with the result that animals do not feed properly and loose weight. For many years, farmers have relied solely on chemical treatments (such as organochlorine, organophosphate, carbaurate and pyrethroid insecticides) to control fly populations, but flies have rapidly developed resistance mechanisms against most of these chemicals and even to the insect growth regulator 'cyromazine' which is recently added to poultry feed. The use of chemicals can be detrimental to human and animal health and pollutes the environment, therefore biological control is recommended.

Good biological control was achieved with a combination of EM/EM5 and wasp parasitoids (Muscidifurax raptor and Spalangia endius). One month before fly season begins, commence spraying EM stock/EM5 6% (6 % EM + 6% molasses + 88% water) at rate 1 litre for $10.65 \, \text{m}^2$ and three days later release four parasitoids per hen in the form of parasitised fly pupae at weekly intervals.