Kairomone Attractant for the Leafmining Fly, Liriomyza bryoniae (Diptera, Agromyzidae)

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A field test carried out in an industrial greenhouse in Lithuania revealed the attractiveness of synthetic methyl salicylate (MeSa) towards an economically important leafmining tomato pest, Liriomyza bryoniae (Kaltenbach) (Diptera, Agromyzidae). The behavioural reaction of the flies depended very much on the simultaneous presence of both olfactory and visual stimuli. The attractiveness depended on the colour of a sticky trap; MeSa attracted significantly more flies (ca. 2.2 times) when placed in yellow traps than in aluminium foil colour ones, when catches in such traps were compared to a corresponding control. L. bryoniae is the first species within the Agromyzidae family attracted by MeSa. The attractant was attributed to kairomones, as the compound is known as a plant-produced volatile. MeSa can be an effective extra-tool for increasing the attractiveness of traps. It should be evaluated in future whether such trap/bait combination is effective for the mass trapping of L. bryoniae leafminers in greenhouses (closed area).

Key words: Visual/Olfactory Stimulation, Trap Colour, Pest Monitoring