

Modelling the potential for ‘Trojan Female Technique’ control of wasp populations

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Naturally occurring mitochondrial DNA (mtDNA) mutations that cause reductions in male fertility are passed onto the next generation down the maternal line, and thus generally avoid negative selection pressure. This provides grounds for utilising such mutations to cause persistent suppression of pest populations, through the introduction of females carrying those mutations (the ‘Trojan Female Technique’). Here we explore the suppressive effects that could potentially be caused by applying this approach to German and common wasps, investigating optimal release strategies of ‘Trojan Female’ queens through simple stochastic modelling.

