O.13 - Using population models to develop management tactics for Tipula paludosa in organic systems

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Leatherjackets, the larvae of *Tipula paludosa* Meig., are pests that are strongly associated with crops that follow grass. This makes organic systems that rely on grass/clover fertility building phases in a rotation particularly vulnerable to attack in comparison with conventional agriculture. There is currently no approved method of controlling leatherjackets in an organic vegetable crop and all available options necessitate some form of advance intervention. Avoidance is the most effective approach and this can take two forms – restricting pest population growth and not planting a crop when it is vulnerable to attack. Other possible techniques are to use cultivations to cause mortality to leatherjackets, or to apply a biopesticide. In this paper I explore this range of options using simulation models of leatherjacket population dynamics and field observations on the timing of instars in the population.