The Black Soldier Fly, *Hermetia illucens*: Optimising conditions for production of insect protein as livestock feed

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Eligible for student prize

Insect derived proteins have been proposed as a potential solution to feeding a rapidly growing human population. However, the process of producing insects on an industrial scale is in its infancy and there is a clear need for scientific guidance to support development and growth. One species that is of commercial importance for insect growers is *Hermetia illucens* Linnaeus, the black soldier fly. I am investigating the uptake of omega-3 polyunsaturated fatty acids by the larvae of *H. illucens*. The omega-3 uptake study will focus on the the ability of the larvae to bioaccumulate fatty acids from a microalgal feedstock. Utilising a microalgal feedstock will allow for quality control by the industry, minimising the risk of accumulating heavy metals that may be present in the current practice of feeding the larvae fish offal. The outcome of this study will help guide the techniques used by commercial black soldier fly growers, assisting in the efficiency and uptake of the technology.