

Fakultät für Agrarwissenschaften Department für Nutztierwissenschaften

Bachelor's thesis

Eggs to beetles: influence of disinfection methods on egg hatching and larval growth across *Tenebrio molitor* strains

In recent years, there has been a growing interest in using insects due to their ability to generate the same amount of protein as traditional farm animals while requiring fewer resources such as land, water, and feed (Kipkoech *et al.*, 2023; Sogari *et al.*, 2023). Moreover, insects serve multiple purposes, such as being used as feed, contributing to the creation of fertilisers, and being utilised in developing diverse cosmetic, industrial, and pharmaceutical products (Patyra & Kwiatek, 2023).

So, what is the problem?

• The dissemination of eggs and larvae among breeders, multipliers, and finishers highlights a critical need for innovative solutions to mitigate contamination and disease spread throughout the production chain

(Green Pet Care, 2024)

Plan and implement the project

What will be your task?

- Develop egg disinfection protocols
- Statistical analysis of data

What should you bring?

- Background in agriculture
- Curiosity
- Interest in insect work
- Knowledge and/or willingness to learn **basic** data analysis
- Proficient in English and German



Sie studieren Agrarwissenschaften oder Biologie?

What do we offer you?

- Mentorship
- Introduction to basic data analysis

Applications are welcome until the 31st of October, 2024.

Literatur:

Green Pet Care. (2024, July 18). What can parakeets eat besides bird food? Green Pet Care. <u>https://www.greenpetcare.com.cn/what-can</u> parakeetseat-besides-bird-food_1717.html

Kipkoech, C., Jaster-Keller, J., Gottschalk, C., Wesonga, J. M., & Maul, R. (2023). African traditional use of edible insects and challenges towards the future trends of food and feed. *Journal of Insects as Food and Feed*, *9*(8), 965-988.

Neis-Beeckmann, P. (2021, April 7). The life cycle of a mealworm from egg, larva, pupa to beetle. BIOPRO Baden-Württemberg GmbH. https://www.biooekonomie-bw.de/en/articles/news/smart-insect-farms-sustainable-protein-sources-future

Patyra, E., & Kwiatek, K. (2023). Insect meals and insect antimicrobial peptides as an alternative for antibiotics and growth promoters in livestock production. *Pathogens*, *12*(6), 854.

Sogari, G., Amato, M., Palmieri, R., Saadoun, J. H., Formici, G., Verneau, F., & Mancini, S. (2023). The future is crawling: Evaluating the potential of insects for food and feed security. *Current research in food science*, *6*, 100504.

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