

Groundbreaking Research Into Live BSFL Feed for Laying Hens Unveiled

UNIVERSITY OF READING REVEALS STAGGERING HEALTH BENEFITS OF BLACK SOLDIER FLY LARVAE

BEACONSFIELD, 25/10/2023 - The University of Reading has revealed exciting research highlighting the benefits of live Black Soldier Fly larvae (BSFL) for laying hens. This innovative study showcases BSFL's impact on performance, overall health, gut health, immunity and well-being of hens.

The study – undertaken in collaboration with ECO nourish and funded by Innovate UK – revealed noticeably increased positive behaviors in hens. Hens without BSFL tended to spend more time engaged in excessive preening, impacting their feather cover. Over the longer term, reduction in excessive preening (a stress behavior) and engagement in positive foraging behavior over injurious behaviors will result in improved feather condition.

BSFL produced higher feed conversion ratios compared to its conventional counterpart, making it more economically efficient and sustainable by reducing the amount of resources needed for the same level of productivity.

Furthermore, the research revealed a reduction in ampicillin resistance among hens offered BSFL. This finding suggests the potential to combat antimicrobial resistance (AMR), a crucial and challenging issue in the poultry industry.

This exciting finding is likely due to the pre- and probiotic qualities of the larvae. Further research (Ndotono et al, 2022) investigated the positive shift in gut microbiota in laying hens fed BSF larvae. They suggest the beneficial bacteria found in the larvae can result in a healthier microbiome for chickens, ensuring good gut health and consequently better immune systems.

In addition, antimicrobial peptides present in Black Soldier Fly larvae can decrease reliance on antibiotics through enhanced natural disease resistance. The study references research by Lee et al. (2018), showing that live BSFL can enhance disease resistance and immunity. This discovery directly confronts the industry's ongoing challenge



of maintaining gut health among laying hens. Combined with the pre and probiotic activity outlined above, BSFL could be a game changer in the fight against antibiotic resistance.

The executive summary goes on to mention that BSFL contain chitin, lauric acid, and a broad spectrum of amino acids, all of which have been proven to promote gut health (Gasco et al., 2018).

Paul Cartwright, co-founder of ECO nourish and former agricultural economist, says, "The study substantiates that the naturally high protein and lipid content of our larvae contributes to the overall well-being and improved nutrition of the birds. It's particularly exciting that antimicrobial compounds in BSF larvae may help limit the spread of AMR and improve gut health, immunity and overall disease resistance."

"Live-feeding BSF larvae to laying hens could drastically reduce reliance on antibiotics. It could also reduce the need for expensive manufactured pre- and probiotics as these are naturally present in the larvae themselves. Introducing BSF larvae to laying hens could also encourage positive behaviors and reduce negative ones that impact the welfare of hens. This all shows feeding live BSF larvae translates to healthier, happier birds and a more sustainable, welfare-conscious poultry industry."

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