Session 5 Insects as feed and bioremediation tool

Session chair: Laura Gasco -Matteo Ottoboni - Daniel Murta

Monday 30 August 2021

8.00	8.15	Insect-fed poultry value chains: trade-offs between opportunities and risks	Saatkamp, H.W.
8.15	8.30	Is the use of live insect larvae as environmental enrichments able to improve broiler welfare?	Biasato, I.
8.30	8.45	Impact of dietary Black Soldier Fly larvae on laying hen performance, egg quality and lipid profile	Patterson, P.H.
8.45	9.00	Selenium biofortification of Hermetia illucens prepupae	Patterson, P.H.
9.00	9.15	Inclusion of Tenebrio molitor in broiler feeds as a partial substitution for hipro soybean meal	Hawkey, K.J.
9.15	9.30	Practical, semi-purified diets for protein requirement determination in Hermetia illucens larvae	Bellezza Oddon, S.
9.30	9.45	Production and optimization of Hermetia Illucens (L.) larvae reared on former foodstuffs	Gligorescu, A.
9.45	10.15	*coffee break*	
10.15	10.30	Effect of dietary crude protein on growth performance of mealworms (Tenebrio molitor)	Paulicks, B.R.
10.30	10.45	Suitability of agro-byproducts for the rearing of Zophobas morio and Alphitobius diaperinus larvae	Rumbos, C.I.
10.45	11.00	Growth and nutrient conversion of BSF larvae fed substrates varying in chemical composition	Veldkamp, T.
11.00	11.15	Rearing density and dietary inclusion of cassava and taro leaves on growth performance in crickets	Cruz, D.

Posters

Effect of the protein level in diets for growth of Tenebrio molitor larvae	Remiro, A.
Isolation and identification of dominant bacteria from black soldier fly larvae for practical uses	Gorrens, E.
Can agro-based wastes be a sustainable approach to improve soil health and productivity?	Malheiro, C.
Development of housefly larvae on manure from herbivores, omnivores and carnivores	Nayak, A.U.
Bioremediation of poultry and pig manure by Black Soldier Fly (Hermetia illucens) larvae	Ligeiro, C.
Replacement of conventional fat sources by Black soldier fly larvae fat in weaned piglet nutrition	Gardan-Salmon, D.
Effects of four mycotoxins on survival, growth and toxin accumulation in Musca domestica larvae	Niermans, K.
Effects of replacing soybean with Black Soldier Fly (Hermetia illucens) in different swine tissues	Vieira, I.
Consumption preference of feed including Tenebrio molitor flour in slow-growing chickens	Nieto, J.
Effect of yellow mealworm meal on growth performance and some welfare traits of broilers	Vasilopoulos, S.
Effects of dietary yellow mealworm on meat composition and liver genes' expression of broilers	Vasilopoulos, S.
Dietary yellow mealworm effects on intestine and liver architecture of broilers	Vasilopoulos, S.
Partially defatted Black Soldier Fly meal inclusion in juvenile pacific white shrimp diets	Guidou, C.
Formulated fly perfume for oviposition control - Developing FlyScent odour attractants using PTR-MS	Nguyen, Q.
Partially defatted Black Soldier Fly meal inclusion in feed of different species.	Guidou, C.

Session 26 Regulatory framework and advances in genetics and genomics of farmed insects

Session chair: Christoph Sandrock - Thomas Lefebvre

Tuesday 31 August 2021

13.30	14.00	**Opportunities for the insect sector under the European Union (EU) regulatory framework**	**Muraru, C.**
14.00	14.30	**A roadmap for black soldier fly breeding and genetics (preliminary running title)**	**Gorjanc, G.**
14.30	15.00	Deciphering the evolutionary history of the black soldier fly, Hermetia illucens, on a global scale	Sandrock, C.
15.00	15.30	*coffee break*	
15.30	15.45	Comparison of pedigree genetic evaluation methods for black soldier fly breeding	Lara, L.A.C.
15.45	16.00	Revivable eggs by cryopreservation for insect production enhancement	Gligorescu, A.
16.00	16.15	Female-biased sex ratio in production colonies of the common housefly, Musca domestica	*Francuski, L.*
16.15	16.30	Molecular and phenotypic polymorphism in Tenebrio molitor: How to characterize strains?	*Evangelina, E.*
1630	17.00	Utility of pooled whole-genome sequences to determine genomic inbreeding in honey bees	Guichard, M.

Poster

Why and how to estimate genetic parameters for Black Soldier Flies?	Bouwman, A.C.

Session 37 **Sustainability assessments of insects as food and feed in a circular economy**
Session chair: Sergiy Smetana - Teun Veldkamp
Wednesday 1 September 2021 + Insect Commission Meeting)

8.00	8.15	Entomoponics: Combining Tenebrio molitor production and greenhouse vegetable production	Coudron, C.L.
8.15	8.30	Industrial symbiosis in insect production—a sustainable eco-efficient and circular business model	Phan Van Phi, C.
8.30	8.45	ValuSect: Valuable inSects	Van Miert, S.
8.45	9.00	Bioavailability of zinc, iron and calcium in cereal porridge fortified with cricket powder	Maiyo, N.C.
9.00	9.15	Precision insect farming: using heatmaps to monitor growth and behavior of T. molitor larvae	Spranghers, T.
9.15	9.30	Environmental opportunities and trade-offs of using feedstuffs for laying hens: LCA of 3 pathways	McBride, M.
9.30	9.45	The effect of rearing conditions on the CO2 output and required air flow in Tenebrio molitor rearing	Wooding, V.K.
9.45	10.15	*coffee break*	
10.15	10.30	Environmental impact of feeds utilized for poultry protein productions: soybean vs insect larvae	Ristic, D.
10.30	10.45	Rapid authentication of edible insect powders by DART/HRMS coupled to mid-level data fusion	Marzoli, F.
10.45	11.00	Strengthening agricultural circularity - the relevance of insect frass	Muraru, C.
11.00	11.15	Safety of black soldier fly (Hermetia illucens) larvae reared on substrates with veterinary drugs	Hoek - Van Den Hil, E.F.
Poster		Inventory and state of the art for sustainable insect production	Peguero*, D.A.
		CELLOW-FeeP Project - Circular Economic: Live Larvae recycling Organic Waste for rural Poultry	Gasco, L.
		Development of new methodologies to measure digestibility of Tenebrio molitor	Peyrichou, F.P.
		Susceptibility of Alphitobius diaperinus meal to infestations by major stored-product insects	Rigopoulou, M.
		Awareness of chemical hazards in edible insects:Toxicokinetics and toxicodynamics of Hg in mealworms	Cardoso, D.N.
		EntoPower: GHG emissions from BSFL production	Gligorescu, A.
		Commission meeting Insects	Veldkamp, T.
11.15	**12.30**		

Session 48 **Standardisation and terminology**
Session chair: David Deruytter - Marwa Shumo

Wednesday 1 September 2021

		Black soldier fly larvae: Standardized feed protocol development and evaluation	**Gasco, L.**
13.30	14.00	Standardisation of yellow mealworm feed experiments: first tests and optimizing the protocol	Van Peer, M.
14.00	14.30	*Working Group discussion*	Deruytter, D.
14.30	15.15	*coffee break*	
15.15	15.45	*Working Group discussion*	Deruytter, D.
15.45	16.30		

Session 55 **Sustainable Insect Chain (H2020 SUSINCHAIN)**
Session chair: Teun Veldkamp Laura Gasco

Thursday 2 September 2021

		Barriers and risks for large-scale commercialization of insect proteins for food and feed in Europe	Alleweldt, F.
8.00	8.30	Upscaling insect rearing: key results and future prospects	Deruytter, D.
8.30	9.00	Insect processing technologies investigated in the H2020 project SUSINCHAIN	Van Campenhout, L.
9.00	9.30	*coffe break*	
9.45	10.15	'Insects in animal feed': structure, aims and preliminary results of digestibility trials	Gasco, L.
10.15	10.45	Insects for food: Can insect-based food products be part of a regular dinner in Europe?	Roos, N.
10.45	11.15	Safety of insect for feed and food investigated in the H2020 project SUSINCHAIN	Van Der Fels-Klerx, H.J.
11.15	11.45	Building economic and environmental optimization model of sustainable insect chains	Smetana, S.
11.45	12.15	*lunch*	
12.15	13.30	**Sustainable Insect Chain (H2020 SUSINCHAIN)**	
Session 64		**Session chair: Teun Veldkamp Laura Gasco**	
		Barriers, risks, and opportunities for scaling up the European insect value chain.	Niyonsaba, H.H.
13.30	13.45	The pH of wetfeed: does it influence the growth of Tenebrio molitor larvae?	Claeys, J.
13.45	14.00	Transporting mealworm (Tenebrio molitor) eggs: the effect of temperature and relative humidity	Deruytter, D.
14.00	14.15	Optimising transport conditions for A. domesticus nymphs and eggs	Steinhausen, C.
14.15	14.30	Vacuum packaging as storage and transport strategy for living or killed black soldier fly larvae	Vandeweyer, D.
14.30	14.45	Horizontal transfer of food pathogens from substrate to insects during rearing	Vandeweyer, D.
14.45	15.00	Texturization potential and microbial safety of fresh-frozen insects within high-moisture extrusion	Leonhardt, L.
15.00	15.15	*coffe break*	
15.15	15.45	Pretreatment strategies to improve insect processing for use as protein rich animal feed ingredient	Peguero, D.A.
15.45	16.00	Apparent digestibility of different batch of Hermetia illucens meals for rainbow trout	Caimi, C.
16.15	16.30	In vivo and in vitro digestibility of black soldier fly larvae meal in Atlantic salmon	Radhakrishnan, G.
16.30	16.45	The nutritional composition of insect-based products for dinners in Europe	Maya, C.
16.45	17.00	LCA modelling strategies and approaches to insect chains	Hossaini, S.
17.00	17.15	Multi-objective optimization for sustainable insect chains	Tonda, A.
17.15	17.30		
Poster		Effects of abiotic factors on viability of BSF eggs: preliminary results for improving egg transport	Cámara, M.