

## Session 7 Insects as food, feed, and technical applications

Session chair: Laura Gasco Co-chair: Matteo Ottoboni

Monday 5 September 2022

8.30	9.00	<b>Consumer perceptions and acceptance of insects as feed: Current findings and future outlook</b>	<b>Sogari, G. (invited)</b>
9.00	9.30	<b>Microbiome in the insect-based feed chain: current scenario and future perspectives</b>	<b>Biasato, I. (invited)</b>
9.30	9.45	Long-term evaluation of black soldier fly larvae meal on Atlantic salmon health in net pens	Radhakrishnan, G.
9.45	10.00	Ability of black soldier fly proteins to decrease oxidative stress in companion animals	Paul, A.
10.00	10.15	Effect of black soldier fly meal dietary integration on production and eggs quality of laying hens	Vitali, A.
10.15	10.45	<i>coffee break</i>	
10.45	11.00	Effect of dietary inclusion of chitinolytic bacteria on insect meal diets for <i>Dicentrarchus labrax</i>	Rangel, F.
11.00	11.15	Broiler eating rate suggests preference for black soldier fly larvae (BSFL) over regular feed	Seyedalmoosavi, M.M.
11.15	11.30	InsectERA – The 57M€ plan to transform Portugal into an insect technology hub	Murta, D.
11.30	11.45	Evaluation of performance and carcass characteristics of growing lambs fed <i>Tenebrio molitor</i> diet	Robles Jimenez, L.E.
11.45	12.00	Impact of adult density and temperature on oviposition and hatchability of <i>Alphitobius diaperinus</i> .	Baliota, G.
12.00	12.15	Amino acid content of <i>Tenebrio molitor</i> L. fed on different diets	Carvão, F.
12.15	12.30	Full-fat insect meals in ruminant nutrition: in vitro rumen fermentation characteristics and lipid biohydrogenation	Renna, M.

### Posters

Performance of slow-growing broilers fed <i>Acheta domesticus</i> meal during the first four weeks of life	Nieto, J.
A survey of edible insect acceptability	Cristóvão, M.
ADVAGROMED: basis and structure of PRIMA 2021 project	Gasco, L.
SensiBug- the use of edible insects in the veterinary nutrition of companion animals.	Gałecki, R.
Artificial senses for quality evaluation of <i>Sparus aurata</i> diet containing <i>Hermetia illucens</i> meal	Di Rosa, A.R.
NETA – New Strategies in Wastewater Treatment	Rehan, I.
Effect of dietary yellow mealworm ( <i>Tenebrio molitor</i> ) in broilers performance and MAPKs activation	Vasilopoulos, S.
Effects of black soldier fly larvae meal on gut health of gilthead seabream ( <i>Sparus aurata</i> L.)	Pansera, L.
CELLOW-Feed Project: growth performance of poultry fed live black soldier fly larvae	Tognoli, C.

## Session 18 Insect production and processing

Session chair: David Deruytter Co-chair: Daniel Murta

Monday 5 September 2022

14.00	14.15	Feeding the larvae: The first results of a large scale mealworm ring test.	Deruytter, D.
14.15	14.30	LOW-VALUE AGRICULTURAL BY-PRODUCTS AS INGREDIENTS FOR BLACK SOLDIER FLY LARVAE	Klaassen, M.T.
14.30	14.45	Crate level climate control for BSFL rearing	Heesakkers, J.W.M.
14.45	15.00	Novel heat-treatment sufficiently controls <i>Varroa</i> levels in honeybee colonies	Sandrock, C.
15.00	15.15	The effect of rearing substrate on black soldier fly larval fatty acid profile: a meta-analysis	Gleeson, E.Y.
15.15	15.30	Effect of six isoenergetic, isonitrogenous, isolipidic, waste-based substrates on adult life traits	Resconi, A.
15.30	15.45	Growth and chemical composition of BSF larvae on biowastes containing similar crude protein content	Veldkamp, T.
15.45	16.15	<i>Coffee Break</i>	
16.15	16.30	Lipid fraction of the black soldier fly larvae diet: consequences on adult parameters	Bellezza Oddon, S.
16.30	16.45	Valorization of local agricultural side-streams from Greece for <i>Tenebrio molitor</i> rearing	Vrontaki, M.
16.45	17.00	Practical guide to commercial BSF farming.	Holtermans, B.
17.00	17.15	Multifaceted approach to high fiber waste management using black soldier fly larvae	Yadav, P.
17.15	17.30	Bioconversion of olive pomace by Black Soldier Fly larvae into a high-quality frass fertilizer	Lopes, I.G.
17.30	17.45	Is 16 hours of daylight better than 12 hours for the production of house crickets?	Holm, L.
17.45	18.00	Optimizing insect rearing chain through the development of a digital twin for insect rearing	Tapio, M.

### Posters

Do vegetal compounds have a potential on yellow mealworm performances during rearing?	Fagnon, M.S.
Counting of insect larvae using computer vision	Carvão, F.
Population dynamics during <i>Tenebrio molitor</i> pupation	Coudron, C.L.
<i>Hermetia illucens</i> and <i>Tenebrio molitor</i> : comparison between heat treatments for microbial reduction	Scremin, M.
Mealworm rearing on substrates enriched with functional ingredients of aromatic and medicinal plants	Gourgouta, M.
Insect substrates: evaluation of efficiency indices	Ottoboni, M.
Black soldier fly larvae as up-cyclers of organic foodwaste	Noyens, I.
Evaluation of plastic degradation capacity by Black Soldier Fly ( <i>Hermetia illucens</i> )	MacHado, M.A.
Bioconversion of olive pomace by Black Soldier fly larvae ( <i>Hermetia Illucens</i> )	Antunes, R.F.

## Session 29 Genetics, physiology, and behaviour of insects

Session chair: Christoph Sandrock - Thomas Lefebvre

Tuesday 6 September 2022

14.00	14.30	<b>Insect genetics</b>	<b>Picard C. (invited)</b>
14.30	14.45	Defining a founding population: Evaluating the genetic diversity in a BSF commercial line	Espinoza, E.M.
14.45	15.00	Influence of Strain Genetics on Larval Performance and Bioconversion Efficiency of <i>Hermetia illucens</i>	Broeckx, L.
15.00	15.15	The reproductive tract of the black soldier fly ( <i>Hermetia illucens</i> ) plays with sexual selection	Bressac, C.
15.15	15.30	A sweet smell: a search for the perfect attractant for female black soldier fly ( <i>Hermetia illucens</i> )	Deruytter, D.
15.30	15.45	Mating compatibility among different <i>Tenebrio molitor</i> strains	Adamaki-Sotiraki, C.
15.45	16.15	<i>coffee break</i>	
16.15	16.30	The symbiotic relationship within ticks and opportunities for disease control	Hussain, S.
16.30	16.45	Prospects of manipulating sex ratios of commercial insect populations	Beukeboom, L.W.
16.45	17.00	An extensive multi-approaches distribution map of <i>Apis mellifera</i> mitochondrial DNA lineages in Italy	Taurisano, V.
17.00	17.15	Deciphering the Genetic Architecture of Honey Production in a Selected Honeybee Population	De Iorio, M.G.

### Posters

Hemolymph analysis as a potential method to assess the quality of insect nutrition.	Gałecki, R.
High-density SNP development in black soldier fly via throughput DNA Pool Sequencing	Donkpegan, A.R.M.E.L.
Identification of selected hemocytes in the hemolymph of the mealworm ( <i>Tenebrio molitor</i> ).	Gałecki, R.

**Session 40 INSECTDOCTORS / INSECTFEED project session**  
**Session chair: Teun Veldkamp Co-chairs: Monique van Oers and Marcel Dicke**

**Wednesday 7 September 2022**

8.30	8.45	INSECT DOCTORS: A European training program focusing on pathogens that threaten mass reared insects	Van Oers, M.M.
8.45	9.00	Nanopore-based Diagnostics and Surveillance of Pathogens in Mass-Reared Insect	Lim, F.S.
9.00	9.15	Probiotics impact on <i>Tenebrio molitor</i> performance, microbial composition and pathogen infection	Savio, C.
9.15	9.30	Impact of heat stress on immunity, fitness & susceptibility to a fungal pathogen in <i>Tenebrio molitor</i>	Herren, P.
9.30	9.45	Effect of co-stressing on the viral abundance of the <i>Acheta domesticus</i> densovirus in house crickets	Takacs, J.
9.45	10.00	Expanding the medfly virome: viral diversity, prevalence, and sRNA profiling in medflies	Hernández-Pelegrín, L.
10.00	10.15	Identification and tissue tropism of newly identified iflavivirus and negevirus in tsetse flies	Huditz, H.-I.
10.15	10.45	<i>coffee break</i>	
10.45	11.00	InsectFeed - Insects as sustainable feed for a circular economy: value chain development	Dicke, M.
11.00	11.15	Preference of black soldier fly larvae for feed substrate previously colonised by conspecific larvae	Kortsmid, Y.
11.15	11.30	Two behaviours related to welfare in housefly ( <i>Musca domestica</i> ) production	Van Der Bruggen, M.
11.30	11.45	Innate immune system of house flies and black soldier flies	Vogel, M.
11.45	12.00	The effect of entomopathogenic <i>Bacillus thuringiensis</i> on housefly development	Voulgari Kokota, A.
12.00	12.15	Effect of feeding black soldier fly products on performance and health of slow-growing broilers	Dorper, A.
12.15	12.30	Economic modelling of Insect-fed broiler value chains: Processed quantities and feasibility analysis	Leipertz, M.

**Poster**

Effects of diet on the expression of immune genes in the house fly (*Musca domestica*)  
Vogel, M.

**Session 51 Workshop on multi-stakeholder views on using insects as feed**  
**Session chair: Marcel Dicke Co-chair: Teun Veldkamp**

**Wednesday 7 September 2022**

14.00	14.15	Workshop on multi-stakeholder views on using insects as feed	Dicke, M.
14.15	14.30	Achieving the 'Farm to Fork' objectives through research and innovation	Nunes, R.
14.30	14.45	Societal issues raised on the use of insects as feed	Dicke, M.
14.45	15.00	Propositions and Introduction open dialogue	Dicke, M.
15.00	15.45	Open dialogue	Dicke, M., Veldkamp, T.
15.45	16.15	<i>Coffee Break</i>	

**Safety and sustainability in the insect chain**

Safety and sustainability in the insect chain

**Session 61 Session chair: Laura Gasco Co-chair: Christoph Sandrock**

**Thursday 8 September 2022**

8.30	8.45	Safety of black soldier fly ( <i>Hermetia illucens</i> ) larvae reared on different biowaste substrates	Hoek- Van Den Hil, E.F.
8.45	9.00	Effects of insecticide residues in feed on reared insects	Meijer, N.P.
9.00	9.15	insect disease monitoring: a proposal for a structural approach	Van Engelen, E.
9.15	9.30	Economic value of frass fertilizer from black soldier fly farming	Beesigamukama, D.
9.30	9.45	Life cycle assessment of <i>Hermetia illucens</i> meal inclusion in diets for trout reared in aquaponics	Bordignon, F.
9.45	10.00	CO <sub>2</sub> and ammonia emitted by mealworms, crickets and black soldier fly larvae.	Coudron, C.L.
10.00	10.15	Sustainable perspectives of insect production	Smetana, S.
10.15	10.45	<i>Coffee Break</i>	
10.45	11.00	Small-scale produced insects in hens' diet as tools for decrease of environmental impact of eggs	Ristic, D.
11.00	11.15	Generic Multi-objective optimised Decision Support tool for Sustainable INsect CHAINS production	Bhatia, A.
11.15	11.30	Carbon footprint of eggs produced by laying hens fed with soybean or <i>Hermetia illucens</i> meal	Vitali, A.

**Posters**

Impacts of cypermethrin residues on mealworm rearing performances  
Dupriez, F.

**11.30 12.30 Insects Study Commission Meeting**

**Veldkamp, T.**