



**EAAP**

European Federation  
of Animal Science

*flash eNews*

[www.eaap.org](http://www.eaap.org)

N° 240

July 2023





# Index

- **News from EAAP**  
pagg. 1-3
- **EAAP People Portrait**  
pag. 3
- **Science and Innovation**  
pagg. 3-5
- **News from EU**  
pagg. 6-7
- **Job Offers**  
pag. 7
- **Industries**  
pagg. 7 -8
- **Publications**  
pag. 8
- **Animal Science Podcasts**  
pag. 8
- **Other News**  
pagg. 8 -9
- **Conferences & Workshops**  
pag. 10



## EDITORIAL

### EDITORIAL BY THE SECRETARY GENERAL

#### Understanding Environmentalism

*Environmentalism has a significant impact on animal production and research, and it is essential for us to fully understand its implications in order to address its requirements effectively. The field of environmentalism encompasses a wide range of organizations, individuals, and institutions with diverse goals and motivations. From NGOs and UN summits to governments and eco-communities, environmental concerns have gained prominence worldwide.*

*While there isn't a single overarching reason for environmentalism, a common logic and history can be observed. It can be argued that environmentalism stems from an "active society" that has undergone a "passive revolution" - originally described by the Italian philosopher Antonio Gramsci for a different context - as governments, businesses, and civil society organizations have adopted environmental discourse. This adoption has resulted in the integration of environmental objectives into various aspects of the global economy. Companies now have environmental strategies and sustainability policies, while consumer products are marketed as "organic," "green," and "sustainable." Governments strive for "sustainable development" through agreements and initiatives.*

*Despite this apparent transformation, the fundamental structures of the socio-economic system remain largely unchanged. Environmental considerations have been adapted to fit within the existing institutions, as the system relies on economic efficiency. The integration of environmentalism into traditional discourse, policies, and economics may create the illusion of a greener system, but it does not fundamentally alter the underlying structures. However, it is equally apparent that the fundamental structures of the system have remained unchanged despite this transformation of appearances. In fact, while environmental considerations have been adopted by the mainstream, they have also been adapted to fit within the current socio-economic institutions. This adjustment is indeed a structural necessity of the current system, as it would cease to function if the barriers to economic efficiency were too high.*

**Andrea Rosati**



## News from EAAP

### The WAAP and EAAP Plenary Sessions

EAAP is delighted to extend an invitation to the upcoming Annual Meeting, to be held in Lyon, featuring nearly 100 animal science sessions. One of the highlights of the conference is the plenary session, which serves as the centrepiece, bringing together distinguished experts. This year, attendees of both the EAAP Annual Meeting and the Sunday conference of the World Association for Animal Production (WAAP) will have the unique opportunity to attend two plenary sessions. On Sunday, August 27th, participants will experience a full day of engaging discussions with the world's foremost animal scientists from every continent. The morning session will focus on the "Control of Green House Gas emissions in Ruminants farming," while the afternoon session will delve into "Biodiversity as a lever for sustainable animal production". [Here you can read the programme of the sessions](#). During the EAAP Annual Meeting, on Tuesday, August 29th, the Plenary Session, co-organized by WAAP, will tackle the thought-provoking theme of "Can we feed the planet without depleting its resources?" In addition, the session will feature presentations from the Leroy Award winner, Hans Soelkner (Austria), the WAAP Award winner, Frank Dunshea (Australia), and introductory speeches by scientists from the hosting country, France. Additionally, you will have the opportunity to actively participate in Question and Answer sessions with the plenary speakers. This is your chance to seek clarifications, share your thoughts, and gain deeper insights into their research, methodologies, and future directions.

### Neogen® Genomics is the new EAAP Industry Club Member



We are pleased to announce that the EAAP Industry Club welcomes a new member: Neogen® Genomics! A short introduction to Neogen Genomics: The company provides an extensive range of agrigenomic services and solutions for food and animal safety. They work alongside breed associations, genetic evaluation providers, companion animal breed registries, academic researchers and directly with individual farmers and animal owners,

offering affordable genotyping and sequencing solutions for various species. With leading commercial genomic laboratories located around the world, Neogen's facilities are close to their customer base. Their laboratories deliver a consistent service with rapid turnaround times, empowering your decision making in genomic selection, health management and research.

### Still possible to participate to the questionnaire that will shape the future of EAAP Scientific Structure

EAAP is committed to evolving and adapting to the ever-changing scientific landscape, and to achieve this, we highly value the input of our members. Therefore, we have developed a comprehensive questionnaire designed to gather your valuable thoughts, suggestions, and aspirations for the future of our federation. Your participation in this survey is of utmost importance to us, as it allows you to have a direct impact on the decision-making process. To access the questionnaire, [please click on the following link](#). The survey is expected to take approximately 10 to 15 minutes to complete. We kindly request that you submit your responses no later than July 14th. Rest assured that all answers provided in the questionnaire will remain completely anonymous.

### The 3rd one-day symposium of the ATF and EAAP Commission on Livestock Farming Systems

Since 2013, the ATF-EAAP Special Session during the EAAP Annual Meeting aims to bring together animal science with practice of animal production and connect researchers, policymakers, industry representatives and societal organisations. Every year, a different topic is addressed during this session.

Once again, and for the third time, the EAAP Commission on Livestock Farming Systems and the ATF have worked together to organise a one-day symposium. The 3rd one-day symposium of the ATF and EAAP Commission on Livestock Farming Systems "Sustainable livestock systems - what does this mean?" will be held on Monday 28th August 2023 from 8:30 to 18:00 during the EAAP annual meeting in Lyon, France. Full programme is available [on the ATF website](#). Registration mandatory [on the EAAP2023 website](#). The outcomes of the session will be discussed with a large panel of European



## Innovating from what nature provides

At **METEX NOOVISTAGO** we produce essential amino acids for better animal nutrition and a more sustainable world. We provide the whole livestock value chain with innovative amino-acids solutions.

[www.metex-noovistago.com](http://www.metex-noovistago.com)



**METEX NOOVISTAGO**  
 Tailored for Animals. Inspired by Nature.

stakeholders during the 13th ATF seminar, in Brussels, on 15 November 2023.

### Still possible to apply for positions at EAAP Study Commissions

We would like to remind you that in order to expand your scientific network and actively engage in EAAP activities, it is advisable to become a member of one of the 11 EAAP Study Commissions. Each year, new positions are available, offering new opportunities to participate in these stimulating groups that design the scientific programs for all EAAP meetings. To join, kindly refer to the “2023 open positions” table below.

COMMISSION	VACANT POSITION
NUTRITION	1 Vice President 2 Secretaries 1 Young Club
GENETIC	2 Vice Presidents 1 Industry Representative
HORSE	1 Vice President 1 Industry Representative
PHYSIOLOGY	1 President
INSECTS	1 Industry Representative 1 Young Club
HEALTH AND WELFARE	1 Young Club
CATTLE	1 Industry Representative
PIG	1 Young Club
PRECISION LIVESTOCK FARMING	1 President 2 Vice Presidents 1 Secretary 1 Industry Representative 1 Young Club
LIVESTOCK FARMING SYSTEMS	1 Secretary
SHEEP AND GOAT	1 President 1 Vice President 1 Secretary 1 Industry Representative





If you are interested in any of these positions, please submit your candidature to [leonora@eaap.org](mailto:leonora@eaap.org) by **July 20th, 2023**.

## EAAP People Portrait

Julia Drews



Julia grew up in a small village in northeast Germany, where she developed an early interest in livestock, especially dairy cows, as her father ran a dairy farm. She assisted in calf care and herd management during

school holidays and, after finishing school, began studying Animal Science at the University of Rostock. Both her bachelor's and master's theses were carried out in collaboration with the State Research Centre of Agriculture and Fisheries Mecklenburg-Vorpommern (LFA), where she participated in and analysed calf feeding trials. The main focus of her studies was the impact of intensive calf rearing on growth, health, and subsequent performance. The results of these studies won her a scholarship that enabled her to expand her knowledge of calf rearing. During and after her studies, Julia stayed overseas in Canada and New Zealand, which broadened her perspective on various farming systems and management strategies. After graduating, she worked for the German breeding association, "RinderAllianz", before deciding to pursue a career in academia. [Read the complete profile here.](#)

## Science and Innovation

### Dairy cow physiology and production limits

Global milk production in dairy cows has been steadily increasing, with significant improvements in average annual milk production per cow. However, the high milk production levels have been associated with a range of health disorders and reduced reproductive performance. The first weeks of lactation are particularly challenging, with an increased incidence of production diseases and reproductive problems. Energy and nutrient requirements for lactation also increase, with energy demands during peak lactation being more than five times greater than those of nonlactating cows. While there is disagreement about whether the limits of milk production have been

reached, the prevalence of health disorders suggests that physiological limits are being exceeded in many cows. Understanding the metabolic stress and its impact on animal health and reproductive performance is crucial for improving overall lifetime performance and longevity in dairy cows. Addressing environmental and management-related factors is also important for optimizing dairy cow performance and welfare. [Read the full article on Animal Frontiers.](#)

### **A framework to estimate the environmentally attainable intake of dairy cows in constraining environments**

This study focuses on predicting the environmentally attainable intake (EAI) of dairy cows under environmentally constrained conditions. Traditional intake models are developed for normal farm conditions where animals have free access to food, but it's important to estimate intake under constrained environmental conditions like climate change. The framework separates the animal side of intake from the environmental side, allowing the study of complex phenotypes such as feed efficiency and genetic by environment interactions. The framework calculates the Eating Rate (ER) and Eating Time (ET) as the major constraints on intake. ER represents the maximum sustainable rate at which animals bite food, while ET is the daily time available for eating. The framework was tested using data from housed and grazing Holstein cows, showing promising results. This time-based framework provides a reliable approach to estimating intake considering environmental variables, with potential for application in other livestock species. [Read the full article on Animal.](#)



### **Priority areas for investment in more sustainable and climate-resilient livestock systems**

Livestock production is essential for society and global agricultural GDP, supporting 1.3 billion people, including 930 million impoverished Africans and South Asians. Livestock serves as a source of income, insurance, and status, while also contributing to crop production, food systems, and nutrient-rich diets. Its positive impact aligns with Sustainable Development Goals (SDGs) related to economic growth, sustainable consumption, resilience, and climate change. However, climate change poses a significant threat, causing extreme weather events, irregular precipitation, and rising temperatures that decrease yields, quality, and disrupt supply chains. Without adaptation, heat stress could reduce cattle production by 4-10% by 2100. Africa and Asia may experience reductions exceeding 50-70% in milk and meat production. Livestock emissions contribute 5.8% of global greenhouse gas emissions and 31.5% of food systems' emissions. Transitioning to climate-resilient, low-emission livestock systems is crucial, targeting agricultural emissions and addressing environmental concerns. Investment in sustainable livestock systems is necessary,



focusing on countries like India, Brazil, China, Pakistan, and Sudan, which play critical roles in the livestock sector's interaction with climate, land, and livelihoods in low- and middle-income countries. Achieving the SDGs requires a shift towards climate-resilient livestock systems and addressing investor concerns. [Read the full article on Nature.](#)

### **A review of the pangenome: how it affects our understanding of genomic variation, selection and breeding in domestic animals?**

Recent large-scale genomic studies have demonstrated that a single reference genome cannot fully capture the genetic diversity present at the species level. Domestic animals, with their complex origin and migration patterns, may have population-specific sequences that are missing from the current reference genome. To address this, the concept of the pangenome has emerged. The pangenome represents the entire collection of DNA sequences in a species, including both shared sequences (core genome) and sequences unique to individuals (variable genome). Pangenomic studies in humans, plants, and domestic animals have revealed missing genetic components and identified large structural variants (SVs) that contribute to biological

adaptability, phenotypes, and economically important traits. Advancements in technologies such as third-generation sequencing and reference-free assembly, combined with multi-omics approaches, will further enhance pangenome research. By analysing genetic variations in domestic animals (such as sheep, cattle, pigs, and chickens), pangenome analysis offers insights into species diversity, animal domestication, evolution, and breeding. This review discusses the applications, challenges, and future perspectives of pangenome research in livestock and poultry. [Read the full article on Journal of Animal Science and Biotechnology.](#)



illumina®

ON-DEMAND WEBINAR

Environmental DNA  
for biomonitoring of  
aquatic ecosystems

Watch on-demand





## News From EU

### The 8th SMARTER newsletter is now available!

The last SMARTER newsletter is available! Enjoy your reading [here!](#)



### GENE-SWitCH Project Annual Meeting 2023 in Rome!

GENE-SWitCH Project held a successful Annual Meeting in Rome discussing Innovations in Genomic Research for Poultry and Pig Breeding. Funded by the European Union, the collaborative research project GENE-SWitCH aims to advance functional genomics and its practical implementation in monogastric breeding. With a focus on identifying and characterising functional genomic elements, implementing FAANG innovation, and standardising data and processes, GENE-SWitCH strives to enhance genetic improvement, animal welfare, and environmental sustainability in the poultry and pig sectors. On the 14th and 15th of June in Rome, the GENE-SWitCH project convened its fourth and last

annual meeting. The event brought together leading experts, stakeholders, and project partners to discuss the latest advancements and results of GENE-SWitCH and to explore new ways to address societal challenges regarding livestock breeding through wide-ranging technologies. The agenda comprised a series of presentations and workshops focused on the project's three main pillars:

- Pillar 1: Identification and characterisation of functional genomic elements.
- Pillar 2: Implementing FAANG (Functional Annotation of Animal Genomes) innovation for animal breeding.
- Pillar 3: Standardisation of data and processes, dissemination, and outreach.

Prominent highlights from the meeting included in-depth presentations on the project's pillars, as well as a fascinating talk by Pr. Huaijun Zhou from UC Davis (USA), giving an overview of the research made on functional annotations of pig and chicken genomes and their use to characterise traits of interest on the American side. [Read the full article here.](#)





## The 7th PPILOW newsletter is now available!

Enjoy your reading [here!](#) For receiving the future issues, [please sign up here.](#)



## Job Offers

### MS – PhD at the University of Tennessee, USA

[The Nutritional and Environmental Physiology laboratory](#) in the Department of Animal Science at the University of Tennessee is seeking a graduate student to investigate nutritional and environmental physiology in dairy cattle. Research projects relate to heat stress physiology in cattle and artificial intelligence applications to manage and feed lactating cows in automatic milking systems. For more information and application [read the job description.](#)

### Two PhD positions at KU Leuven, Belgium

The following PhD positions are available within [KU Leuven](#):

- [Development of novel methodologies and models for milk quality monitoring.](#) An MSc degree in (bio)statistics, chemometrics, artificial intelligence, bioscience, bioscience-engineering or equivalent is required.
- [IoT in agriculture: Development of novel sensors for online milk quality and cow health and welfare monitoring.](#) An MSc in biosciences, bioscience-engineering, engineering (technology), or equivalent is required.

Both positions are for 4 years, preferably starting on the 1st of September 2023 or earlier. Deadline: **17 July 2023.**

## Post-doctoral position at Ghent University, Belgium

A Post-doctoral position is available in the [department Animal Sciences and Aquatic Ecology](#) at Ghent University. A doctoral degree in Bioscience Engineering, Veterinary Sciences, or a degree considered equivalent by the commission, is required. Deadline: **1 August 2023.** For more information and application [read the job vacancy.](#)

## Industries

**Where are we on our journey towards climate neutrality?**



### Part 1 of a webinar by Dr Kebreab

Planet boundaries for phosphorus and biodiversity are at risk, they are 2 planet boundaries for which we are beyond the zone of uncertainty. For greenhouse gas emissions we are still in the zone of uncertainty, which means we need to intensify our efforts to achieve reductions of methane emissions of livestock (see Figure 1).

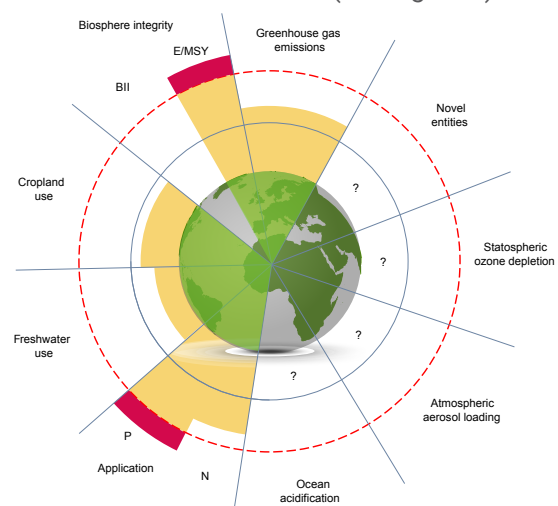


Figure 1: Planet boundaries for different parameters with an environmental impact.

During a recent webinar entitled “**Effective strategies to reduce the carbon footprint of dairy cattle**”, Dr Ermias Kebreab discussed what needs to be done to achieve the goals set by the Global Methane Pledge, signed by over 150 countries. Dr Kebreab is Associate Dean and Professor of Animal Science at the University of California, Davis. He is one of the worlds’ leading experts in animal nutrition, mathematical modelling of biological systems and impact of livestock on the environment. [Read the full article here.](#)

## Publications

• Wageningen Academics Publishers

[Journal of Insects as Food and Feed, Volume 9, issue 8, 2023](#)

## Animal Science Podcasts

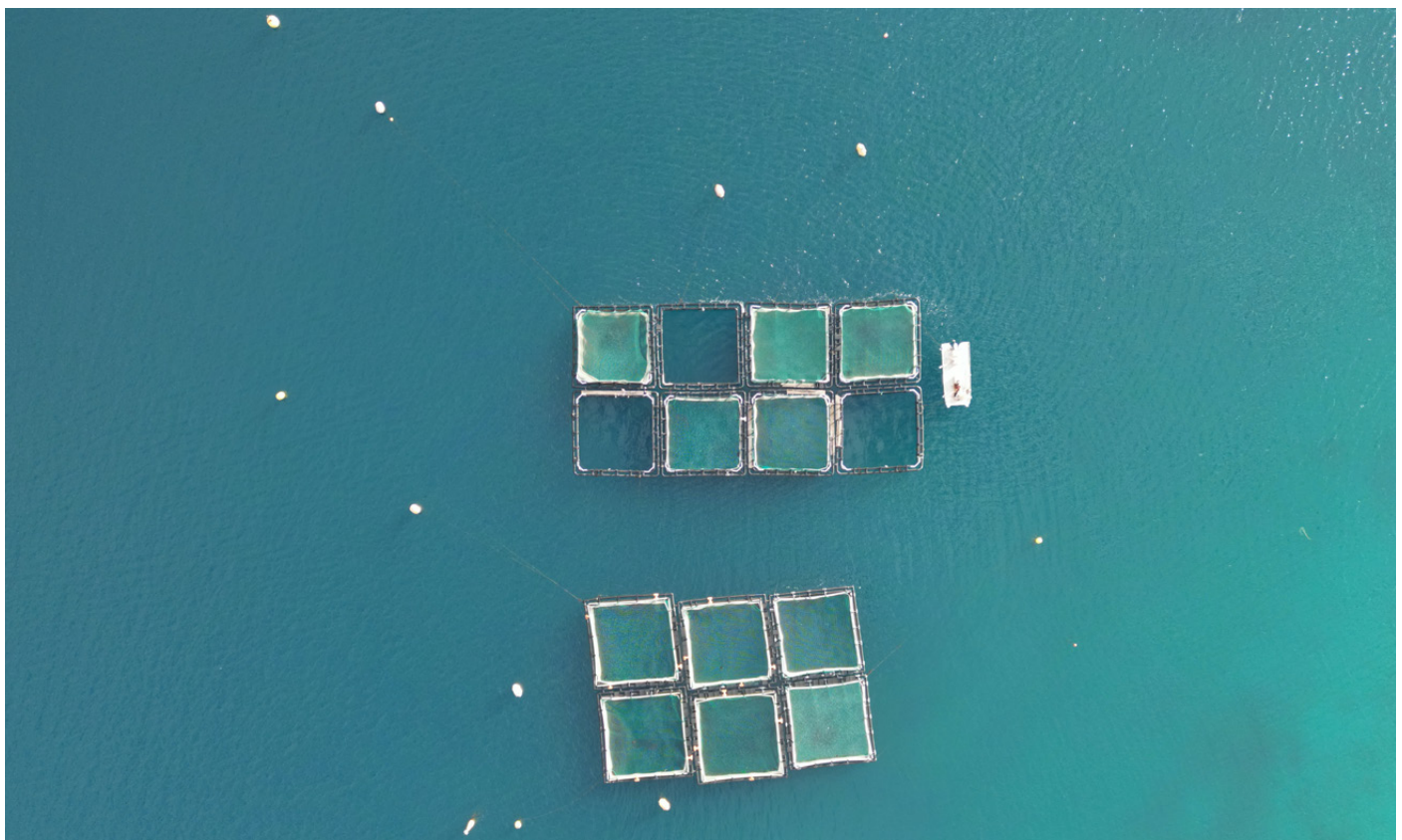


European Food Safety Authority - EFSA: Episode 7: [Climate change: what it means for food safety](#), speaker Angelo Maggiore

## Other News

### look at salmon farming: Genetics, disease resistance and RAS

Some key suppliers discuss the current challenges and trends of the salmon industry from a hatchery perspective. Salmon farming is a mature industry with an established value chain and proven technology with 2,719.6 thousand tonnes produced of Atlantic salmon in 2020 (SOFIA, 2022). Hatchery Feed & Management talked with some key suppliers to discuss the current challenges from the hatchery perspective and get a look at the current trends. Success starts at the hatchery, and high-quality eggs are a major factor in the performance and survival of salmon. “It should be said that these days, there are no real ‘bad eggs’ anymore,” said Bram Geurts, director of sales & marketing and salmonids, Hendrix Genetics. [Read the full article here.](#)





### **3rd Animal Sciences Student Camp 2023!**

The Animal Science Federation of Turkey is happy to open registrations to the 3rd Animal Sciences Student Camp, which will be organized between September 28th- 31st August, 2023. The number of international participants is limited to 20. Those who want to participate must register by **August 5th, 2023** at the latest. For further information, please contact by email Dr Ahmet Uçar at [ucara55@hotmail.com](mailto:ucara55@hotmail.com) .

### **What would a world without livestock be like?**

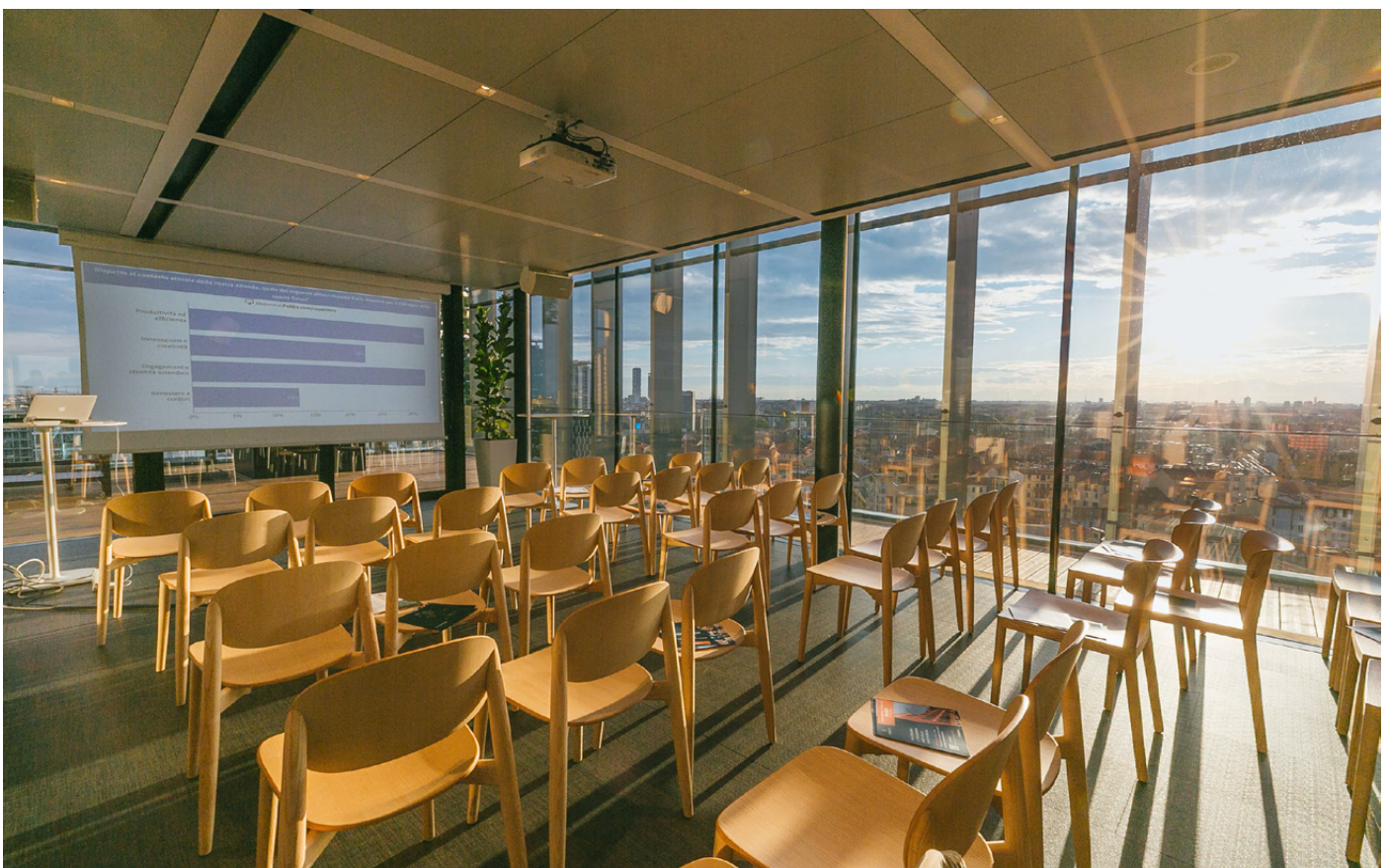
Diana Rodgers explains that in a world without livestock there would be severe nutritional consequences. Many essential nutrients we need are found in animal-source foods more easily, and these are especially important for children. In agriculture on the whole, livestock is also important for growing crops as they provide a natural fertiliser. [Watch the video here!](#)

## Conferences & Workshops

EAAP invites you to check the validity of the dates for every single event **published below and in the Calendar of the website**, due to the state of sanitary emergency that World is currently dealing with.

Event	Date	Location	Information
ASAS – CSAS – WSASAS Annual Meeting 2023	16 – 20 July 2023	Albuquerque, New Mexico	<a href="#">Website</a>
69th International Congress of Meat Science and Technology	20 – 25 August 2023	Padua, Italy	<a href="#">Website</a>
61st International Fair of Agriculture and Food (AGRA)	26 – 31 August 2023	Gornja Radgona, Slovenia	<a href="#">Website</a>
74th EAAP Annual Meeting	28 August – 1 September 2023	Lyon, France	<a href="#">Website</a>
22nd meeting FAO-CIHEAM Mountain Pastures – Sub-Network	12 – 14 September 2023	Petroșani, Romania	<a href="#">Website</a>
ISAS 2023 – International Symposium on Animal Science	18 – 20 September 2023	Novi Sad, Serbia	<a href="#">Website</a>
Pig Research Summit – THINK Piglet Health & Nutrition 2023	21 – 22 September 2023	Copenhagen, Denmark	<a href="#">Website</a>
International Conference on Animal Sciences and Veterinary	2 – 3 October 2023	Tbilisi, Georgia	<a href="#">Website</a>
8th International Feeding Meeting “Present and Future Challenges” (FEED 2023)	9 – 10 October 2023	Milan, Italy	<a href="#">Website</a>
SAADC2023	21 – 24 November 2023	Vientiane, Laos	<a href="#">Website</a>

More conferences and workshops [are available on EAAP website](#).





*“The foolish and the dead alone never change their opinions”*

*(James Russell Lowell)*

### **Become EAAP Members is easy!**

Become EAAP individual member to receive the EAAP newsletter and discover the many other benefits!  
Please also remember that individual membership is for free for residents in EAAP countries.

[Click here to check and register!](#)

The **Flash-e-News** is the Official EAAP Newsletter. This interesting update about activities of the European animal science community, presents information on leading research institutions in Europe and also informs on developments in the industry sector related to animal science and production. The Newsletter is sent to all EAAP Members and supporters. You are all invited to submit information for the newsletter. Please send information, news, text, photos and logo to: [marlene@eaap.org](mailto:marlene@eaap.org).

**EAAP Secretariat is located at the following address:** Via G. Tomassetti 3, A/1 - Rome (Italy). Tel.: +39-06-44 20 26 39;  
Fax: +39-06-44 26 67 98; E-mail: [eaap@eaap.org](mailto:eaap@eaap.org)

**Production staff:** Marlène Sciarretta, Federica Motterle, Andrea Rosati, Eleonora Azzaro.

**Graphics design and layout:** Gianfilippo Ercolani, Danilo Domenici

**Address Corrections:** If your email address is going to be changed please send us the new one, so that we can continue to deliver the Newsletter to you.