WORLD ASSOCIATION for ANIMAL PRODUCTION

Number 27 2022

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The World Animal Science News

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EDITORIAL

Why a supplement issue of ANIMAL on "Sustainable livestock systems for high-producing animals"?

WAAP, in association with EAAP and under the editorial responsibility of six scientists leaded by Prof. Joao Carlos Caetano Simoes that I want to thank here for their involvement, has just coordinated a special issue of the scientific journal ANIMAL on sustainable livestock systems for high-producing animals. This supplement gathers 18 peer-review articles from 88 worldwide authors. All these articles are freely available in Open Access. It has different justifications and objectives.

Our ability to meet the food demand for animal protein of an expected global population of around 10 billion by 2050 is, first of all, a major challenge. At the global level, there is a great heterogeneity between geographical zones of animal production and human populations. Some low-producing areas are home to a large human population while other high-producing areas are sparsely populated which constitutes an additional difficulty.

Second, the production of animal proteins takes place in different farming systems which all have significant environmental impacts: greenhouse gas emissions from animals and manure, water and air pollutants, high demand for energy for animal feed. This is a major problem on a planet with limited resources and a growing human population. It is therefore necessary to reflect on how to reduce these impacts within intensive and semi-extensive systems which are likely to remain a solid basis for future production.

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Editorial (continues)

Current farming systems were gradually developed from the second half of the last century, mainly in Europe and North America, where protein production now exceeds human demand. They have been able to significantly increase productivity in these regions, ensuring food safety and security at relatively low economic cost and with reasonable "quality" (organoleptic characteristics and nutritional content). This food abundance, combined with the development of human populations and the threats of climate change, have gradually brought to light the fact that animal welfare and the environmental impact of animal production are two major challenges for these systems. Currently, they influence government policies in different countries to find solutions at national and global levels, while ensuring the availability of food for human and animal populations. Environmental impacts can be mitigated by changes in these production systems. For example, the intensification of animal lines maintained under well-controlled conditions, genetic selection using genomic tools for the improvement of production and resistance to diseases, constitution of larger farms allowing the implementation of innovations, improvement of food efficiency are among the tools of these intensive and semi-intensive production systems. Animal welfare has also become important as a required constraint in these systems, not only to maximize the health and behavioural status of animals, but also to meet consumer and societal demand for an ethical approach to animal husbandry. However, respecting the environment, animal welfare and production objectives require a holistic approach to these new animal production systems. This supplement seeks to identify and describe scientific and technical approaches that can help reduce the footprint of intensive and semi-intensive livestock production systems in high yielding species (mainly for meat, milk and eggs), as well as the challenges and trends over the next 2-3 decades. I am happy that WAAP can thus contribute to advancing not only scientific knowledge, but also implementation of innovations allowing animal production to ensure the satisfaction of consumers' needs, while respecting our planet. Eighty-eight scientists worked for 2 years to produce 18 articles for inclusion in this critical issue on "Sustainable livestock systems for high producing animals." I strongly encourage you to widely disseminate this special issue to all scientists, technicians, educators, students and policy makes within your organizations. The entire issue is Gold Open Access, so freely available to everyone. I know you will enjoy it! Happy reading everyone.

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From WAAP Members

American Dairy Science Association® (ADSA®)

ADSA News



ADSA 2022 congress meeting in Kansas City, Missouri, from 19-22 June will be an in-person meeting



The 2022 ADSA Annual Meeting scientific program will expect to feature 1,200 oral and poster presentations in the dairy domain. Around 2,000 scientists from 50 countries meet in-person in vibrant Kansas City, Missouri, or participate virtually. The meeting is composed of scientific sessions, symposia, workshops and preconference events. Topics include dairy food science, dairy production, animal health

and well-being, animal and human nutrition, food safety, and production and management.
Visit the website for the 2022 ADSA Annual Meeting here. Registration and housing will open soon.
You can Submit a request for your event at ADSA 2022 today.

Deadline for abstract submission is February 17th, 2022 (strictly).

Some of the symposia to be held:
- Associations of Cow and Worker Welfare
- Beyond Genetic Markers – Additional Data to Improve Long-Term Selection
- Qualitative Research Methods in Dairy Science
- Consumer Perceptions of Dairy – Are They Fact or Fiction?
- Artificial Intelligence and Machine Learning in Dairy Production Systems
- Determinants and Consequences of Systemic Inflammation During the Dairy Cow Transition Period
- Metabolic Derangements in Calves During the Preweaning Period
- ADSA / EAAP Exchange symposium: Harnessing Cow Efficiency and Technical Innovation for a Climate Caring Dairy Sector "

This last joint symposium will also be held at the EAAP meeting in Porto, Portugal, from 5th-9th September 2022, in cooperation with the project CCCFarming.

Next ADSA meetings:

Ottawa, Ontario, Canada, June 25th-28th, 2023
West Palm Beach, Florida, USA, June 16th-20th, 2024

The 42nd Discover Conference- Managing Genetic Diversity for Future Dairy and Livestock Breeding

This conference will be a Hybrid Conference held April 19th -21st , 2022 at Northern Illinois University Naperville Conference Centre, hosted by the American Dairy Science Association®. Conference Topics include (Click here for additional information):

• Current and future potential genetic diversity status and issues;
• Genetic diversity assessments of major and minor livestock breeds;
• Retrospective assessments inbred livestock & poultry populations;
• New methods for assessing and using genetic diversity;
• Potential use of cloning and gene editing;
• Breeders and Breed Association round table – current and future drivers for genetic utilization and profitability.

The 43rd Discover Conference- Dairy Cattle Reproduction: Lessons Learned and Future Frontiers

This conference will be held May 31-June 3, 2022 at the Eaglewood Resort & Spa in Itasca, IL, hosted by the American Dairy Science Association®. Conference Topics include (for additional information, Click Here):

• Translating basic biology into novel reproductive management strategies;
• Promoting reproductive success through Improved health and nutrition;
• Data assisted reproductive management and automation;
• New frontiers in genetics and ARTs (Assisted Reproductive Technologies);
• The future of reproduction in dairy farming in a changing world;
To improve the reproduction in dairy farming in a changing world.

American Society of Animal Science (ASAS)

ASAS News

AMERICAN SOCIETY OF ANIMAL SCIENCE

The American Society of Animal Science - ASAS is continuing to offer monthly webinars, visit the dedicated webpage for a list of previous webinars. Webinars are available to all members of ASAS, if not a member registration is $25. Prefer to join ASAS so you receive all the benefits of membership? You can join online here.

Upcoming American Society of Animal Science Meetings:

The ASAS Midwest Section Annual Meeting will be held in Omaha, Nebraska, March 14th -16th, 2022. Program information can be found on the meeting website. Registration deadline is **February 8th, 2022**.

The ASAS-CSAS Annual Meeting will be held in Oklahoma City, Oklahoma, June 26th -30th, 2022. Visit the meeting website for meeting details.

- Early discounted registration deadline is **February 11th**, 2022;
- Abstract submission deadline is **March 22nd**, 2022.

The 2022 Aspen Perinatal Biology Symposium will be held in Aspen, Colorado, August 28th -30th, 2022. Registration and abstract submission are now open and available here.

The ASAS Western Section Meeting will take place in Park City, Utah, September 20th-22nd, 2022. Details will be available on the meeting webpage.

ASAS Publications

Journal of Animal Science (JAS) is the premier journal for animal science and serves as the leading source of new knowledge and perspective in this area. JAS publishes more than 500 fully reviewed research articles, invited reviews, technical notes, and letters to the editor each year.

Translational Animal Science (TAS) is the first open access-open review animal science journal, encompassing a broad scope of research topics in animal science. TAS focuses on translating basic science to innovation, and validation of these innovations by various segments of the allied animal industry.

Animal Frontiers is published in 6 issues by the American Society of Animal Science (ASAS), Canadian Society of Animal Science (CSAS), the European Federation of Animal Science (EAAP), the American Meat Science Association (AMSA), the World Association for Animal Production (WAAP) and a rotating guest society. This magazine synthesizes information, through applied reviews, from across disciplines within the animal sciences. Animal Frontiers is provided as a benefit to the members of these societies.

European Federation of Animal Science (EAAP)

73rd EAAP Annual Meeting - Porto 2022 – Registration is open!

EAAP is delighted to inform you that the registration for the 73rd Annual Meeting of EAAP, that will be held in Porto (classified as World Heritage by UNESCO in 1996), IS NOW OPEN! The local organizers are the Portuguese Association of Animal Science (APEZ) and the Portuguese National Institute of Agriculture

and Veterinary Research (INIAV) with the patronage of the Ministry of Agriculture from the Portuguese Government. Make sure you secure your place to participate to the largest animal science congress in the Europe and one of the largest in the world. Register here.
The registration includes access to all conference sessions, the exhibition and demonstration area, the poster area, the welcoming ceremony, the networking area, all coffee breaks and lunches for the entire meeting period. Virtual registration is also available. We're looking forward to seeing you in Porto on 5th -9th September 2022!

Abstract Submission for the 2022 EAAP Annual Meeting is open!

The Abstracts Submission for the 2022 EAAP Annual Meeting is finally open! The deadline for the submission will be **March 1st, 2022.** All authors wishing to present papers at the EAAP Annual Meeting are required to submit the title and abstract of their presentations using the online application platform OASES. Only abstracts submitted using the online application will be considered for publication. Authors will be informed by mid-April 2022, whether their abstracts have been accepted for presentation at the Annual Meeting. Abstracts must be written in English. The abstract should contain the specific objectives, experimental methods and statistical analyses used, together with a synthesis of the results and conclusions. The abstract must not exceed 2,500 characters (including title, authors, addresses, spaces, and punctuation). Please note that each author can present a maximum of 2 submitted abstracts. Presentations will be accepted as oral presentations or as posters. Only abstracts submitted using online application are considered for publication. In case of any questions, please contact Wageningen Academic Publishers (eaap2022@wageningenacademic.com). Please be aware that authors, who submit abstracts, but fail to register for the Conference by the 31st May 2022 will have their presentations removed from the program and their abstracts will not be inserted in the Abstract Book/CD. To see the draft program please chick here.

Application for EAAP Scholarship 2022 is open!

Online applications for EAAP Scholarships are open! EAAP is happy to provide the same number of scholarships offered last year: this means that up to 20 applicants will receive financial support to attend the next EAAP Annual Meeting in Porto! Details and information are available on EAAP website.

Special issue Animal "Sustainable livestock systems for high-producing animals"

EAAP is proud to announce that the Special issue of the journal Animal entitled "Sustainable livestock systems for high-producing animals" is now published on animal journal by Elsevier. This supplement issue seeks to identify and describe the scientific and technical approaches that may contribute to reduce the footprint of intensive and semi-intensive livestock systems of production in the high producing species (mainly for meat, milk and eggs), as well as the challenges and trends over the next 2–3 decades. EAAP and WAAP actively supported the production of this interesting issue. You can read it here: Volume 15, Supplement 1, December 2021.

"What could be the future of cultured meat?", a new EAAP Webinar!

The 9th EAAP Webinar will deal with cultured meal and will be offered for free by EAAP on February 8th. There will be three presentations from experts on this particularly important topic: ***Federica Cheli*** and ***Carlotta Giromini*** will jointly give a speech on *Cultured meat and food safety: research priorities and future challenges*. **Daniele Asioli** will talk about *Consumer Valuation for Cultured Meat: Findings from the European Union and the United States*. Finally, ***Jean-François Hocquette*** will inform the audience on *Cultured Meat: Is it possible? Is it good? Is it acceptable?* To participate to this online seminar and to all future EAAP webinars, please visit Webinars – EAAP Annual Meetings.

Latin American Association of Animal Production (ALPA)

ALPA News

ALPA: Livestock and environment

1. Latin America and the Caribbean (LAC) have 667 million people distributed in 20 million km2 of 20 countries. It includes 20 million farms, of which 15 million are considered family and small farms. This means that probably about 100 million people live directly from them, and a very significant number of the services, finance, and public sectors among others also depend to varying degrees on agriculture. Grasslands and prairies constitute a very important use of land resources (soil, vegetation, water, etc.) throughout the continent. It is estimated that the ratio of the human population to the stock of large ruminants in the region is around 1.2 to 1. Ruminant animals are associated with a very important popular, folklore, and culinary culture, as well as a considerable social, customs, and economic influence. It is known that most family farms have livestock, which constitutes a highly important income and nutritional source for the rural population by way of milk, dairy products, and meat from minor ruminants, it is also a form of capitalization and savings to attend educational and health needs and provides animal traction and nutrient recycling.

There is concern about the effects of the ruminant population in relation to climate change. As can be inferred from the above, the problem for LAC is multidimensional since livestock is key in nutritional, economic, social, and environmental aspects. Part of the environmental effects is associated with the production of greenhouse gases (methane and nitrous oxide), another part with grasslands and meadows degradation, with concomitant effects on the cycles of water, carbon, and erosion, and the associated effects of deforestation in some regions, as well as loss of biodiversity in various cases. On the other hand, year-round grazing of grasslands and ranges contributes to landscape diversity and above all, to the sustenance of the rural population.

The global methane balance estimated by the Global Carbon Project (research partner of the World Climate Research Program, WCRP), indicates that each year about 590 Tera-grams of CH4 are emitted (1 Tera-gram or Tg is equivalent to one million tons). At the same time, each year there are about 570 Tg of CH4 that are converted into CO2 or absorbed in the soil. That is, 95% of the methane that is emitted does not remain in the atmosphere. The global methane balance indicates that of the 590 Tg emitted of CH4 per year, about 110 Tg come from fossil fuels and about 230 Tg come from the agricultural sector and waste management. The other 240 Tg of methane come from natural processes. Therefore, it is estimated that reducing emissions from fossil fuel use by 20% would result in a net methane emission of zero.

Reductions greater than 20% would result in negative net emissions and reductions in the concentration of methane in the atmosphere, with the consequent immediate effect on global temperature.

The foregoing does not exempt the livestock sector from its responsibility in helping to reduce the effects of climate change. In LAC, with predominantly year-round grazing systems, the debate should prioritize the reduction of GHG, increasing soil C sequestration and improving pasture management. Important elements in this reduction include the elimination of burning, the introduction of improved, well-managed pastures, the recovery of degraded grazing areas and their spatial and temporal integration with trees / shrubs and annual crops, the conservation of native animal genetic resources, and the sustainable intensification of livestock by reducing livestock inventories and liberating grazing areas through the improvement of pastures and their management, genetic improvement , enhancement of reproduction performance, and strategic supplementation according to time of year and production level. ALPA has initiated discussions on the above aspects in its various virtual forums

and by promoting the publication of dedicated issues in its journal, Archivos Latinoamericanos de Producción Animal.

Consequently, ALPA and its members have an important responsibility in pursuing these principles, generating quantitative and medium-term information on the different alternatives, informing the livestock sector, including associated institutions (for example, primary and secondary education, agricultural extension, farmers associations), the media, and in particular policy decision-makers on the delicate social, economic, and environmental balance involved in livestock production activities.

2. The Board of Directors approved the creation of the ALPA Extension Magazine. The position of editor of this Technical Magazine was summoned to competition, among the Members of the ALPA organization. Hugo Petrocelli from Uruguay (former President of ALPA) was nominated as Editor and Ivana Varea from Argentina as Assistant Editor of the Magazine, that will circulate periodically.

3. The XXVII Meeting of ALPA 2022 will not take place in Colombia, and in consultation with different national associations, the support of the Mexican Association of Animal Production was received to hold said meeting in Mexico in 2022. Stay tuned for the call.

4. Successful congress N ° 46 of SOCHIPA addressed intelligent livestock farming as a central theme. The 46th Annual Congress of the Chilean Society of Animal Production-SOCHIPA A.G. 2021, held virtually on November 10, 11 and 12, and organized by the National Animal Production Area of the Agricultural Research Institute (INIA). 73 scientific papers from various areas of animal production were presented, interviews with prominent national partners, an innovative contest for undergraduate and graduate students, the traditional photographic contest, and the Symposium on Smart Livestock.

5. From November 17th to 19th 2021, the 44th Argentine Congress of Animal Production was held. 1950 people from Argentina registered on the platform, in addition to Mexico, Uruguay, Ecuador, Peru, Colombia, Paraguay, Chile, Brazil, Venezuela, Bolivia, Nicaragua, Honduras, Panama, Guatemala, Dominican Republic, Costa Rica, United States, Canada, Spain, Germany, England, New Zealand, Australia, Japan, India, Netherlands, Polynesia, Tunisia, Ukraine. On Friday, November 19th , at the closing ceremony of the Congress, Dr. Adriana Andrés took office as President of the Argentine Association of Animal Production (AAPA). In the history of the association, it is the first time that a woman will occupy the presidency.

6. The first issue of Latin American Archives of Animal Production is available on the ALPA website since December 17th, 2021. You can read it here.

News from Science

Resistant bacteria discovered in chicken in study in Peru



A group of Peruvian researchers have detected increased microbial resistance in samples of chicken and beef in markets of Lima city, the capital of the Latin-American country.
Read the full article on PoultryWorld.

The genetic identity of the earliest human-made hybrid animals, the kungas of Syro-Mesopotamia

A new genome sequencing study has uncovered the earliest known evidence of hybrid animal breeding,

confirming that mysterious 4500-year-old equid skeletons most likely belonged to domesticated hybrid animals called kungas. Read the full article on ScienceAdvances.

News from Industry

Japan in 2022: Dairy consumption, production, demand

look at Japan's dairy sector shows an expectation that, in 2022, fluid milk production will increase by about 1%, butter production will be down year-on-year, and domestic cheese production is likely to expand.
Read the full article on Dairy Global.



Canada: World's 3rd largest exporter of pork and pigs

In the weeks and months leading up to the event United Pork Americas, Pig Progress takes a deep dive in pig countries in the Americas. What is pork production like in the various countries in both continents and what are the perspectives for development? Today: a deeper look at Canada.
Read the full article on Pig Progress.



Job Offers

2 PhD candidates in automated detection and genetics of social behaviors in pigs and laying hens at WUR, The Netherlands

Wageningen University & Research is looking for two enthusiastic PhD students who will study the automated detection and quantitative genetics of social behavioural interactions in groups of pigs and laying hens.Application deadline is **January 27th, 2022**. For more information visit the webpage.

Public Affairs Manager position open at FEFANA, Brussels, Belgium

FEFANA is currently seeking a Public Affairs Manager. The successful candidate will join the Brussels-based FEFANA Secretariat team. She or he will be reporting directly to the Secretary General. Application deadline is **January 28th, 2022**. For more information please visit the job vacancy.

Assistant/Associate Professor in Molecular and Cellular Biology at University of Florida, US

The Institute of Food and Agricultural Sciences of the University of Florida is looking for an Assistant/ Associate Professor in Molecular and Cellular Biology. Application deadline is **March 11th, 2022.** For more information read the job vacancy.

Publications

1.Elsevier

Animal:Volume 16- Issue 1 – January 2022
Article of the month: "Nature, nurture, and vegetation management: Studies with sheep and goats".

2. New technical articles have been recently published on Engormix:

I. "Yeast probiotics to boost fish gut health and improve feed efficiency"

II. "C-13 internal standards for mycotoxins analysis: trend or necessity?"

III. "The Future of Swine Farming is in the Americas"

IV. "Can methane be reduced on the dairy cost effectively?"

Meetings and Conferences

WAAP 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.

March 14th – 16th 2022, Omaha, Nebraska, USA

ASAS Midwest Section Annual Meeting

The ASAS Midwest Section Annual Meeting will be held in Omaha, Nebraska, March 14th -16th, 2022. Program information can be found on the meeting website.

March 28th – 29th 2022, Mainz/Online, Germany

8th International Akademie Fresenius Feed Conference

The 8th International Akademie Fresenius Feed Conference will be taking place once again in 2022: on 28 and 29 March in Mainz (Germany). For the first time ever, this on-site conference will be streamed live! For many years, the Akademie Fresenius Feed Conference has been the perfect platform for bringing together the scientific, industrial and regulatory communities. Jürgen Zentek, Freie Universität Berlin, will support the conference as the Chair and as a speaker. For more information visit the website.

April 12th – 14th 2022, Nottingham/Online, United Kingdom

BSAS Annual Conference 2022

The BSAS Annual Conference 2022 will take place in Nottingham (and virtually) from 12th to 14th April 2022. The theme will be: "Role of the Animals in Human and Planetary Health", the debate will be about the role that animals play on the wider stage of dietary, environmental and mental health. Submission deadline for abstracts: **31st October 2021**. For more information visit the website.

May 17th – 20th 2022, Rotterdam, The Netherlands

15th Symposium Digestive Physiology of Pigs

The 15th International Symposium on Digestive Physiology of Pigs (DPP2022) will be held in Rotterdam, The Netherlands, between May 17th and 20th 2022. The overall theme "Science for Sustainable Nutrition" will be addressed in six sessions covering a wide range of provisional topics. For more information and registration visit the website.

June 19th – 22nd 2022, Kansas City, USA

2022 ADSA Annual Meeting

The Next ADSA Annual meeting will be held in Kansas City June 19th -22nd, 2022. For more information visit the 2022 ADSA Annual Meeting website.

June 26th – 30th 2022, Oklahoma City, Oklahoma, USA

ASAS-CSAS Annual Meeting

The ASAS-CSAS Annual Meeting will be held in Oklahoma City, Oklahoma, June 26th -30th, 2022. Visit the meeting website for meeting details.

June 26th – 30th 2022, Bologna, Italy

19th International Congress on Animal Reproduction (ICAR 2020+2)

The 19th International Congress on Animal Reproduction (ICAR 2020+2) will take place in Bologna from 26 to 30 June 2022. For more information about the conference visit the website.

June 30th – July 1st 2022, Edinburgh, UK

HSA International Conference Livestock Welfare during Transport, Marketing & Slaughter

The Humane Slaughter Association's international conference will be held in Edinburgh next summer. The event will give attendees the opportunity to present their work, and to network and socialise in person More information can be found here.

July 3rd – 8th 2022, Rotterdam, The Netherlands

12th World Congress on Genetics Applied to Livestock Production (WCGALP)

The 12th World Congress on Genetics Applied to Livestock Production will be held in Rotterdam (The Netherlands) from 3rd - 8th July 2022! For more information please visit the website.

July 5th – 7th 2022, Cairns, Australia

34th AAAS Conference "Anchoring Knowledge, Exploring the Animal Science Ecosystems"

The 34th AAAS Conference "Anchoring Knowledge, Exploring the Animal Science Ecosystems", organized by the Australian Association of Animal Sciences (AAAS) will take place in Cairns, Australia, from 5th to 7th July 2022. Information about the event is available on the website.

September 5th – 9th 2022, Porto, Portugal

73rd EAAP Annual Meeting

EAAP is delighted to invite you to the 73rd Annual Meeting. It will be held from 5th to 9th September 2022 in Porto, the marvelous city of Portugal. For more and updated information visit the EAAP2022 website.

September 12th – 15th 2022, Granada, Spain

7th EAAP International Symposium on Energy and Protein Metabolism and Nutrition (ISEP 2022)

The 7th EAAP International Symposium on Energy and Protein Metabolism and Nutrition (ISEP 2022) will be held in Granada (Spain) from September 12-15, 2022. For detailed information and registration visit the website.

September 26th – 28th 2022, Bolzano, Italy

8th European Symposium on South American Camelids and 4th European Meeting on Fibre Animals

The Symposium will be held at the Free University of Bolzano. Following the tradition of previous events, the Symposium will cover a broad range of topics related to breeding and husbandry of South American domestic and wild Camelids, wool sheep, Cashmere and Angora goats, Angora rabbits and any other fibre producing mammals in Europe and beyond. Deadline abstracts: March 31, 2022. For more information read the flyer.

More conferences and workshops are available on EAAP website.

The **World Animal Science News** is the Official WAAP Newsletter. This interesting update about activities of the global animal science community presents information on leading research institutions in the entire world and also informs on developments in the industry sector related to animal science and production. The Newsletter is sent to all WAAP member organizations and to their associates. You are all invited to submit information for the newsletter. Please send information, news, text, photos and logo to waap@waap.it .

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