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Dear WRSA officers and members,

Six months have passed since our fifteen Newsletter. One month before we will come together and celebrate our world congress, there are certain aspects that we want to inform you about and that will surely be of interest to you. We have tried to summarize the main news of these last seven months in the current issue.

Letter from the WRSA President

Dear WRSA members and followers,

Sorry for the slight delay in the publication of this new volume of WRSA News but this has been a very intense period for the WRSA board.

As you all well know, next month we will celebrate our World Rabbit Congress (13thWRC) from October 2 to 4, 2024 in Tarragona (Spain) <https://www.wrc2024.com>. This involves a great effort and activity for the WRSA. The Organizing Committee of the 13th WRC, made up of the Spanish Rabbit Association (ASESCU) and the Institute of Agrifood Research and Technology of Catalonia (IRTA), are working so that we can enjoy a great event, where we will combine science and technology, with the possibility of enjoying Tarragona city and the relationships with our colleagues. On the other hand, the Scientific Committee of the 13th WRC is organizing a scientific program, with invited presentations, round tables, as well as oral communications and poster sessions, which will ensure we enjoy an event of high scientific interest.

You still have time if you haven't registered yet!

From the WRSA we commend you for continuing with your magnificent work and commitment to rabbit science, which allows a new but hopeful future for this species.

Do not forget to use our discussion forum for every question to our community:

<https://groups.google.com/forum/world-rabbit-science-asso>

Publish in the WRSA journal, World Rabbit Science <http://polipapers.upv.es/index.php/wrs>

Visit our WRSA website <http://world-rabbit-science.com/>

and our Facebook page <https://www.facebook.com/wrsaface/>

Best wishes

Juan José PASCUAL  

WRSA President

Universitat Politècnica de Valencia (Spain)

Last News of the World Rabbit Congress

After almost four years of preparation, the long-awaited moment has finally arrived: the **13th World Rabbit Congress** opens its doors in Tarragona, Spain! We are excited to share this event that brings together scientists, industry, technicians and producers from all over the world to celebrate the best of rabbit farming.

The congress will be held at the **Tarragona Trade Fair and Congress Centre** (Carrer Arquitecte Rovira, 2, Tarragona) from **2 to 4 October 2024**. Don't forget, too, the pre-congress course that will be held on 1 October 2024!

Here's an overview of the program:



Tuesday, October 1, 2024:

15:00 to 19:30 Registration.

16:00 to 20:00 Pre-congress course: Experiment and you'll see!

Wednesday, October 2, 2024:

8:00 Registration.

9:00 to 9:30 Opening of the World Congress.

9:30 to 10:00 Pathology Presentation: *Study on novel vaccines and adjuvants for rabbit infectious diseases*. Yee Huang. Researcher at the Institute of Animal Husbandry and Veterinary Sciences, Zhejiang Academy of Agricultural Sciences 310021, Hangzhou (China).

11:30 a.m. to 12:00 p.m. Nutrition Paper: *Alternative methods in rabbit nutrition trials*. María Cambra. Professor of the Department of Animal Science at the Polytechnic University of Valencia.

13:00 to 13:30: Presentation on Production Systems and Agricultural Economics: *Climatic impact of rabbit farming (intensive and extensive): carbon footprint & energy consumption*. Davi Savietto. Researcher at the French National Research Institute for Agriculture, Food and Environment - INRAE Toulouse (France).

15:00 to 16:30. Genetics Roundtable: *New direction of genetic selection*. Moderated by Agustín Blasco. Professor of the Department of Animal Science at the Polytechnic University of Valencia.

4:30 p.m. to 6:00 p.m. Pathology Roundtable: *National Programs to Reduce Antibiotic Consumption*. Moderated by Luca Bano. Researcher at the Istituto Zooprofilattico Sperimentale delle Venezie (Italy).

18:00 to 18:30. Reception at the Tarragona Trade Fair and Congress Centre.

18:45. Guided tour of the City of Tarragona, sponsored by the Tarragona City Mayor.

Thursday, October 3, 2024:

8:00. Registration.

9:00 to 9:30. Animal Welfare Presentation Ethology and Welfare Session: *Welfare indicators in rabbits (use in the field, positive indicators)*. Angela Trocino. Professor at the Department of Agronomy Food Natural Resources Animals Environment, University of Padova (Italy).

11:00 to 11:30. Reproduction Presentation: *Advances in semen cryopreservation*. Nicolaia Iaffaldana. Professor at the Dipartimento di Agricoltura, Ambiente e Alimenti, Campobasso (Italy).

12:30 to 13:00. Product Quality Presentation: *Meat quality with an approach to processing products and the use of spices or specific ingredients as antioxidants*. Simone Mancini. Researcher at the Department of Veterinary Sciences of the University of Pisa (Italy).

2:30 p.m. to 4:00 p.m. Animal Welfare Roundtable: *The End of the Age of Cages: Current State of Alternatives*. Moderated by Juan José Pascual. President of the World Rabbit Science Association.
5:30 p.m. to 7:00 p.m. Roundtable on Agricultural Systems and Economy: *Specific needs for the sustainability of rabbit production around the world*. Moderated by Saidu Oseni. Professor of Department of Animal Sciences, Faculty of Agriculture, Obafemi Awolowo University, Ile-Ife, Nigeria.
20:00. Transport to Gala Dinner at L'Orangerie Restaurant (Camí Vell de Cambrils, 180; Vila-Seca, Tarragona).



Friday, October 4, 2024:

8:30 Registration.

9:30 to 10:00. Biology and Physiology Presentation: *Rabbit Microbiota - impact on health and performance*. Sylvie Combes. Researcher at GenPhySE INRAE (France).

11:30 a.m. to 12:00 p.m. Genetic Improvement Presentation: *Exploring innovative approaches for enhancing the efficiency and sustainability of rabbit production. A critical analysis of cutting-edge technologies and currently established methods*. Juan Pablo Sánchez. Researcher at the Institute of Agrifood Research and Technology – IRTA (Spain).

1:00 p.m. to 1:30 p.m. Miscellaneous Presentation: *Digitalization and livestock precision farming tools for rabbit farming*. Tomas Norton. Researcher at KU Leuven (Belgium).

Remember that, in addition, throughout the congress, we will be able to enjoy the presentation of almost 200 scientific communications belonging to the nine sessions of the congress: Nutrition, Pathology and Hygiene, Ethology and Animal Welfare, Genetics, Reproduction, Agricultural Systems and Economics, Product Quality, Biology and Physiology, and Miscellaneous.

You can find more information about the congress in www.wrc2024.com



Mariam Pascual

13th World Rabbit Congress Manager

Selected Publications

As you well know, **World Rabbit Science** (WRS) is one of the few indexed journals (JIF 2023: 0.800) that remains in the hands of academia (Universitat Politècnica de Valencia) and our scientific association. Thanks to this, WRS is a **free access** journal for readers **with no publication fees** for authors.

Currently, our institutions and PhD students ask us to publish in Q1 open access journals to increase our indexes. Consequently, publishers, that are aware of this situation, make us must **spend a significant amount of money** to publish our knowledge yearly. However, **we have the solution in our hands**, a journal that publishes in open access and without fees. We are completely sure that, if WRSA members send high quality papers to WRS for 2-3 years we would place it in Q1, solving all these problems forever.

Here you can find the three most Popular Articles in World Rabbit Science in the last 180 days:

1. Energy balance and body reserves in rabbit females selected for longevity (2460 views)
<https://doi.org/10.4995/wrs.2017.5216>

2. Screening of virulence genes in *Staphylococcus aureus* isolates from rabbits (2430 views) <https://doi.org/10.4995/wrs.2015.3961>
3. Study on the nutrient adequacy of feeds for pet rabbits available in the Italian market (1312 views) <https://doi.org/10.4995/wrs.2010.7532>

Recent publications (last 6 months) in World Rabbit Science with high number of downloads:

1. Potential, challenges and prospects of rabbit farming in urban and peri-urban areas of Dodoma city, Tanzania (84 downloads/month) <https://doi.org/10.4995/wrs.2024.20238>
2. Mange in farmed rabbits (65 downloads/month) <https://doi.org/10.4995/wrs.2024.20624>
3. Pastured rabbit systems and organic certification: European union regulations and technical and economic performance in France (55 downloads/month) <https://doi.org/10.4995/wrs.2024.20894>
4. Growth performance and carcass characteristics of rabbits fed concentrate diets containing graded levels of *Brassica oleracea* outer leaves and *Musa paradisiaca* leaves (52 downloads/month) <https://doi.org/10.4995/wrs.2024.19616>
5. A method to estimate endogenous losses of nitrogen and amino acids at the ileal level in growing rabbits (50 downloads/month) <https://doi.org/10.4995/wrs.2024.19654>
6. Preference and acceptance of fresh rabbit, pork and chicken meat sausages among young consumers (42 downloads/month) <https://doi.org/10.4995/wrs.2024.20236>
7. Use of dehydrated sainfoin (*Onobrychis viciifolia*) in rabbit feeding. 2 - Effects of a high dietary incorporation on performance and health of does and growing rabbits, under a sub-optimal breeding commercial environment (41 downloads/month) <https://doi.org/10.4995/wrs.2024.19848>
8. Niche partitioning and competition between different rabbit breeds using stable isotopes (41 downloads/month) <https://doi.org/10.4995/wrs.2024.19934>
9. Consumer perception of supplementing rabbit diets with seaweed to reduce antibiotic use in rabbit production in Spain (39 downloads/month) <https://doi.org/10.4995/wrs.2024.21157>
10. Effects of supplementing pistachio skins in the diet on growth performance and the fatty acid profile of *Biceps femoris* and *Longissimus dorsi* muscles in rabbits (37 downloads/month) <https://doi.org/10.4995/wrs.2024.20230>

Other publications of interest in the last 6 months:

1. Biomarkers for ideal protein: rabbit diet metabolomics varying key amino acids. *Comm Biol.* <https://www.nature.com/articles/s42003-024-06322-2>
2. Marine macroalgae in rabbit feed – Effects on meat quality. *Meat Sci.* <https://doi.org/10.1016/j.meatsci.2024.109584>
3. Oral supplementation with postbiotics modulates the immune response produced by myxomatosis vaccination in wild rabbits. *Vaccine.* <https://doi.org/10.1016/j.vaccine.2024.05.026>
4. Rabbit feeding robot: Autonomous navigation and precision feeding. *Biosystem. Eng.* <https://doi.org/10.1016/j.biosystemseng.2024.02.002>
5. Pedigree based description of the Pannon White rabbit. *Livest. Sci.* <https://doi.org/10.1016/j.livsci.2024.105460>
6. Differential ovulation responses in nulliparous and multiparous rabbit females: A cannula-mediated study. *Livest. Sci.* <https://doi.org/10.1016/j.livsci.2024.105475>
7. Novel phenotypes of feeding and social behaviour and their relationship with individual rabbit growth and feed efficiency. *Animal.* <https://doi.org/10.1016/j.animal.2024.101090>
8. Method: eFeederRab: A new electronic feeder to measure individual feed intake-related traits on growing rabbits raised in collective cages. *Animal – Open Space.* <https://doi.org/10.1016/j.anopes.2024.100074>
9. Efficient and repeatable in vitro fertilization in rabbits. *Theriogenology.* <https://doi.org/10.1016/j.theriogenology.2024.01.009>

10. Immunogenicity and safety in rabbits of a *Clostridioides difficile* vaccine combining novel toxoids and a novel adjuvant. Vaccine. <https://doi.org/10.1016/j.vaccine.2024.01.076>

International and National Congresses

In the last six months, WRSA has news about two events held around the world.

WEBINAR: Main indicators and methods for assessing the welfare of rabbits in breeding, ASIC (Italy).

On February 29, 2025, ASIC held this webinar through the ZOOM platform. The main indicators and methods for assessing the welfare of rabbits in breeding: report of the European Reference Centre for the Welfare of Poultry and Small Farmed Species (EURCAW-Poultry SFA) and the Italian Scientific Association of Rabbit Breeding promoted the webinar "The main indicators and methods for assessing the welfare of rabbits in breeding according to the report of the European Reference Centre for the Welfare of Poultry and Small Farmed Species (EURCAW-Poultry SFA)". Technicians and operators discussed the most recent scientific data available, the EURCAW guidelines and the field situation. The meeting, organized with the collaboration and support of the Experimental Zooprophyllactic Institute of Lombardy and Emilia-Romagna (IZSLER), aimed to be a table for identifying field needs and evaluating operational solutions.

ASIC Conference 2024 in Naples (Italy)

The last Convegno Annuale ASIC (Italian Scientific Association of Rabbit Breeding) has been hold on April 15, 2024 in the Centro Congressi Federico II, Napoli (Italy).

Scientific literature defines the term "sustainability" as "the need to take care of the ecological, economic and sociological consequences of development choices for present and future generations" (Gibon et al., 1999). The United Nations Agenda 2030 focuses on a program of actions in 17 sustainable development goals to be achieved within the next 10 years. Consistent with the policies of the European Commission, in the context of rabbit production, the sustainability objectives include in the first instance the correct quantification and reduction of the environmental impact of farming, the development of low-impact food strategies, as well as health management that reduce the problem of antibiotic resistance.

The objective of this last ASIC 2024 conference was therefore to examine different strategies to increase the sustainability of rabbit production through an integrated approach, as broad as possible, to respond to global and European objectives. On the occasion of the conference, there was also a session of scientific communications on the topics of Sustainability in the broad sense (environmental impact, food and nutritional strategies, health management, breeding systems).

More information at <https://www.asic-wrsa.it>



48th Symposium of Rabbit Farming ADESCU, Cordoba (Spain)

The 48th edition of the ADESCU Rabbit Farming Symposium has been held on April 23 and 24, 2024 in Córdoba. It has been co-organized by the Department of Animal Production of the Faculty of Veterinary Medicine of the University of Córdoba. The headquarters of the Symposium was in the building of the Rectorate of the University of Córdoba, former Faculty of Veterinary Medicine, an incomparable setting in a neo-Mudejar regionalist style building with a central location.

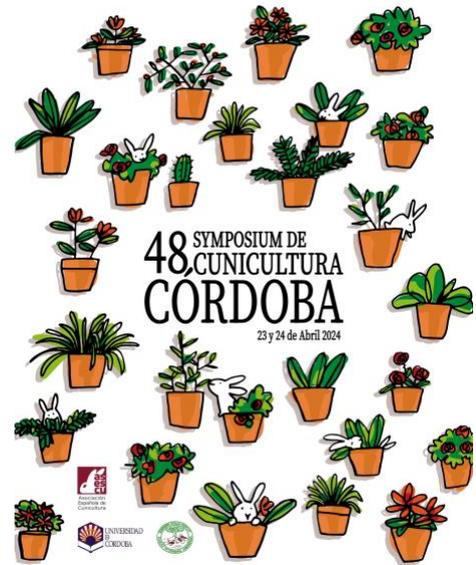
The 48th Rabbit Farming Symposium was an excellent opportunity to bring together the sector, its technicians and researchers to update the current situation and advances in the field of rabbit farming, and will also provide an approach to rabbit farming in southern Spain.

A total of four main lectures were delivered. One of these lectures discussed the current state of cuniculture in Andalusia, while another examined the evolution of the sector in Italy. Another lecture focused on state-of-the-art of alternatives to cages for rabbit housing, and the fourth lecture covered new rabbit lines developed for disease resistance. Additionally, two round tables were held, discussing the main challenges in the rabbit farming sector and new veterinary legislation.

A total of 25 communications were presented on various topics, including nutrition, genetics, reproduction, housing and welfare, pathology and products. The event was attended by approximately 130 participants from various European and American countries.

Information about the Symposium will be updated on the website:

<https://asescu.com/symposiums/libros-de-acta/>



XIX National Meeting in Rabbit Farming online (Mexico)

The XIX National Meeting in Rabbit Farming on line, organized by the National Association of Mexican Rabbit Breeders (ANCUM) and the Intertropical Society of Rabbit Farming (SIC), has been held on April 27 and 28, 2024 throughout the Google Meet platform.

In this event participated 24 people from 11 different countries (Mexico, Argentina, Cuba, Spain, Peru, Venezuela, Colombia, Brazil, Paraguay, Bolivia and Uruguay). A total of 5 main papers were presented on artificial insemination, socioeconomic implantation of rabbit farming, future of the rabbit in America, and rabbit nutrition. Other 19 works in rabbit economy, reproduction, genetics, housing, pathology, nutrition, gastronomy, meat quality and environment were also presented.

More information of this event could be obtained contacting the ANCUM presidency at info@ancum.com.mx or at <https://www.ancum.com.mx>



UPCOMING 2025 CONGRESSES:

20th Journées de la Recherche Cunicole (JRC), Rennes (France)

The 20th French Rabbit Research Days will be held in Rennes on 14 and 15 May 2025.

The Rabbit Research Days have been organized since 1973 by ITAVI and INRAE, with the participation of ASFC. They allow all stakeholders in the rabbit industry (breeders, producer groups, cooperatives, feed and equipment manufacturers, slaughterhouses, professional organizations, etc.) to be presented with the most recent research results and to discuss them. They concern all the major areas of rabbit breeding and meat production: feeding, genetics, pathology, reproduction, breeding techniques, growth, meat and carcass quality, economics, etc.

For this 20th edition, we invite you to Rennes at the Maison des Associations 6 cours des Alliés 35000 Rennes.

The organization invite you to submit a detailed abstract for the next JRC. The abstract must include at least the following elements: Introduction: Present the context and objectives of your research; Materials and Methods: Describe the protocol of your study; Preliminary Results: Share the first results obtained, even if they are still being analyzed. These elements are essential to evaluate the relevance and quality of the work submitted.

Use the sciencesconf platform to submit your abstract:

<https://evenements.itavi.asso.fr/evenement/20emes-journees-de-la-recherche-cunicole>

Deadline for receipt of communication proposals: September 6, 2024

49th Symposium of Rabbit Farming ADESCU, Burgos (Spain)

The 48th edition of the ADESCU Rabbit Farming Symposium will be on May or June, 2025 in Burgos. Although the dates, venue and programme of the Symposium have not yet been set, in the coming months you will be able to find information on how to attend and send communications to the event at:

<https://asescu.com>



New WRSA branches

Finally, we did not want to close this newsletter without informing you that WRSA board has provided the preliminary acceptance to the "**Czech Rabbit Science Association (CRSA)**" as a national Branch of WRSA from May 13th, 2024.

This national association, promoted by Dr. Zdeněk Volek (Prague, Czech Republic), has been initially consisting in June, 2022, with 12 members including researchers and technicians from the field of Czech rabbit farming.

The Association will receive the final acceptance in the next General Assembly of the WRSA (to be held in the 13th WRC, Tarragona, Spain).

From the WRSA we just want to congratulate and welcome you.



Best regards and we hope to see you all in a month at the world congress,

Juan José Pascual
President of WRSA



Valencia (Spain), August 30, 2024