

INTERNATIONAL SYMPOSIUM ON
SUSTAINABLE ANIMAL PRODUCTION
AND HEALTH
CURRENT STATUS AND WAY FORWARD



Joint FAO/IAEA Centre
Nuclear Techniques in Food and Agriculture

28 JUNE – 2 JULY 2021

10:00 - 15:00 CET

VIRTUAL EVENT

INTERNATIONAL SYMPOSIUM ON SUSTAINABLE ANIMAL PRODUCTION AND HEALTH

CURRENT STATUS AND WAY FORWARD

MONDAY

28 June 2021, 10:00-12:30

10:00 - 10:30

Opening Remarks

Moderator: Gerrit Viljoen, Joint FAO/IAEA Centre

Rafael Mariano GROSSI, Director General IAEA
QU Dongyu, Director General FAO
Monique ELOIT, Director General OIE

Welcome

Najat Mokhtar, Deputy Director General IAEA

10:30 - 12:30

Session 1

Keynote Speakers and Panel Discussion

Moderator: Gerrit Viljoen, Joint FAO/IAEA Centre

Andrea Gavinelli
European Commission, Belgium

Ren Wang
China National GeneBank, China

Daniel Bercovici
International Feed Industry Federation, Germany

Franck Berthe
World Bank, United States of America

Norbert Nowotny
Joint FAO/IAEA Centre, University of Veterinary Medicine Vienna, Austria

- Livestock production and productivity
- Emerging and re-emerging animal diseases
- Climate change, environment and biodiversity
- Livestock policy and investments
- Changes in food habits: societal concerns regarding food of animal origin
- COVID-19, MERS and SARS

Live Q&A will be held at the end of the session

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MONDAY

28 June 2021, 12:30-15:00

12:30 - 15:00

Session 2

Molecular Tools for Animal Production and Health

Moderator: Charles Lamien, Joint FAO/IAEA Centre

Disease diagnosis

Cameron Stewart

Commonwealth Scientific and Industrial Research Organisation, Australia

Sequencing and whole genome sequencing

Alessio Lorusso

Istituto Zooprofilattico Sperimentale dell' Abruzzo e del Molise Giuseppe Caporale, Italy

Vaccine matching and quality control

Aldo Dekker

Wageningen University & Research, The Netherlands

Genetic improvement of smallholder dairy cattle for sustainable dairy systems: traditional and genomic approaches

John Gibson

University of New England, Australia

Genomic approaches to unravel the genetic basis of productive and adaptive traits in livestock

Paolo Ajmone Marsan

Universita Cattolica del Sacro Cuore, Italy

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MONDAY

28 June 2021, 15:00-17:15

Special Session: Commemoration of the 10th Anniversary of Rinderpest Eradication and Maintaining Global Freedom

Moderator: Keith Sumption, FAO

15:00 - 15:05

Welcome

Maria Helena Semedo, Deputy Director General FAO

15:05 - 15:30

Opening of the 10th anniversary of rinderpest eradication

QU Dongyu, Director General FAO

Rafael Mariano GROSSI, Director General IAEA

Monique ELOIT, Director General OIE

15:30 - 15:35

Video on eradication efforts and the maintenance of global freedom for 10 years

15:35 - 15:50

Post-eradication challenges and achievements

Junaidu Maina, FAO-OIE Rinderpest Joint Advisory Committee

Samia Metwally, FAO

Mariana Marrana, OIE

15:50 - 16:35

Panel discussion

Moderators: Keith Sumption, FAO - Mark Rweyemamu, former FAO EMPRES Head

Vaccine, vaccination and herd immunity

Henry Wamwayi and Santanu Bandyopadhyay

Diagnostics

Martyn Jeggo

Eradication programme management

Peter Roeder and Bill Taylor

Lessons learned: global health and challenges

Santanu Bandyopadhyay

16:35 - 17:05

General discussion and addressing questions from the floor

Moderator: Berhe Tekola, former AGA Director

17:05 - 17:15

Closing Remarks

Juan Lubroth, former FAO CVO

Gerrit Viljoen, Joint FAO/IAEA Centre

Keith Hamilton, OIE

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TUESDAY

29 June 2021, 10:00-12:30

10:00 - 12:30

Session 3

Advances in Vaccinology

Moderator: Viskam Wijewardana, Joint FAO/IAEA Centre

Low-energy electron irradiation for the generation of inactivated vaccines

Sebastian Ulbert

Fraunhofer Institute for Cell Therapy and Immunology, Germany

Irradiated vaccines

Elena Gaidamakova

Uniformed Services University of the Health Sciences, United States of America

Irradiated *Hemonchus contortus* vaccine in field trials

Jayanthe Rajapakse

University of Peradeniya, Sri Lanka

Novel approaches for bacterial vaccines (CCPP)

Jörg Jores

University of Bern, Switzerland

Development of mucosal vaccine against Peste-des-Petits Ruminants virus for small ruminants

Muhammad Salah Ud Din Shah

Nuclear Institute for Agriculture and Biology, Pakistan

Mucosal immunity in large animals

Jean-Pierre Scheerlinck

University of Melbourne, Australia

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TUESDAY

29 June 2021, 12:30-15:00

12:30 - 15:00

Session 4

Emergency Preparedness and Response

Moderator: Ivancho Naletoski, Joint FAO/IAEA Centre

Applied biosafety in the field

Uwe Müller-Doblies

Merk Sharp & Dome, Austria

Neglected or underreported animal health emergencies caused by zoonotic arboviruses in Africa

Martin Groschup

Friedrich-Loeffler Institut, Germany

Adaptation of techniques into laboratory networks

Trevor Shoemaker

Center for Disease Control and Prevention, United States of America

The role of national authorities

Abel Wade

Laboratoire National Vétérinaire, Cameroon

Monitoring emerging zoonotic disease threats and characterizing behavioral risk in high-risk communities in Senegal

Modou Moustapha Lo

Institut Sénégalais de Recherches Agricoles, Senegal

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WEDNESDAY

30 June 2021, 10:00-12:30

10:00 - 12:30

Session 5

Zoonotic Diseases, COVID-19 and ZODIAC

Moderator: Norbert Nowotny, Joint FAO/IAEA Centre / University of Veterinary Medicine Vienna, Austria

OIE programme for preventing and controlling zoonotic diseases

Mariana Marrana

World Organisation for Animal Health, France

Laboratory response for the control of zoonotic outbreaks: the Ebola example

Jacqueline Weyer

National Institute for Communicable Diseases, South Africa

SARS-CoV2: its origin and the role of animals in the COVID-19 pandemic

Marion Koopmans

Erasmus University Medical Center, The Netherlands

The role of wildlife in the emergence and spread of zoonotic diseases

Melinda Rostal

EcoHealth Alliance, United States of America

ZODIAC project

Gerrit Viljoen

Joint FAO/IAEA Centre, Austria

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WEDNESDAY

30 June 2021, 12:30-15:00

12:30 - 15:00

Session 6

Enhancing Livestock's Contribution to One Health and the SDGs

Moderator: Paul Boettcher, Joint FAO/IAEA Centre

Antimicrobial Resistance – laboratory, surveillance and research in the FAO Action Plan (2021-2025)

Francesca Latronico, FAO

Emergency management centre for animal health

Frédéric Poudevigne, FAO

Preparing laboratory services for major emergencies - laboratory contingency plans and simulation exercises: what can be done even in a virtual world

Pam Hullinger, FAO

Preparing laboratory services for major emergencies - diagnostic reagent banks: example of Balkans

Kiril Krstevski, FAO

Connecting animal movements and other risks to optimise surveillance in West Africa

Baba Soumaré, FAO

The role of the livestock master plan in the development of the livestock sector

Clarisse Ingabire, FAO

Health hazards in animal feed

Gijs Kleter

Wageningen University & Research, The Netherlands

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THURSDAY

1 July 2021, 10:00-12:30

10:00 - 12:30

Session 7

Challenges for Better Livestock Production in the Developing World

Moderator: Mario Garcia, Joint FAO/IAEA Centre

Changing livestock sector: Can research and new technology contribute to agri-food system innovation?

Jeroen Dijkman

Wageningen University & Research, The Netherlands

Transformation strategies to improve the water productivity in agriculture in semi-arid regions

Simone Kraatz

Hochschule Anhalt, Germany

Adopting reproductive biotechnologies for animal breeding: issues in developing countries

Joao Henrique Moreira Viana

Brazilian Agricultural Research Corporation, Brazil

Domestic animal biodiversity loss: potential risks for global food security

Mary Mbole-Kariuki

African Union, Inter-African Bureau for Animal Resources, Kenya

Livestock resilience to emerging diseases and climate change: a game changer to building back better food systems post-COVID-19

Mohammed Shamsuddin

FAO, Italy

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THURSDAY

1 July 2021, 12:30-15:00

12:30 - 15:00

Session 8

**Advances in Biotechnologies for Improving
Livestock Breeding and Feeding**

Moderator: Bharani Settypalli, Joint FAO/IAEA Centre

**Using genetics to combat climate change and improve
heat tolerance in dairy cows**

Jennie Pryce

Agriculture Victoria and La Trobe University, Australia

**Understanding endometrial function for fertility, food and
health**

Niamh Forde

University of Leeds, United Kingdom

**Artificial breeding in practice for sheep and goat: the
Sardinian example for the developing world**

Maria Dattena

Agenzia Regionale per la Ricerca in Agricoltura, Italy

**Measuring feed intake under grazing and browsing
conditions: an achievable task?**

Robert Mayes

James Hutton Institute, United Kingdom

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FRIDAY

2 July 2021, 11:00-14:00

11:00 - 13:30

Session 9

Application of Improved Technologies for Sustainable Livestock Productivity: The Way Forward

Moderator: Victor Tsuma, Joint FAO/IAEA Centre

European Union actions for a sustainable and innovative animal nutrition sector

Wolfgang Trunk

European Commission, Belgium

Application of nuclear and genomic technologies for improving livestock productivity in the developing world: challenges and opportunities

Raphael Mrode

International Livestock Research Institute, Kenya

Strengthening breeding stock: strategies for implementing advanced embryo production technologies

Joao Henrique Moreira Viana

Brazilian Agricultural Research Corporation, Brazil

Precision livestock farming and beyond

Tami Brown-Brandl

University of Nebraska–Lincoln, United States of America

13:30 - 14:00

Closing Ceremony

Moderator: Gerrit Viljoen, Joint FAO/IAEA Centre

Maria Helena Semedo, Deputy Director General FAO

Liang Qu, Director Joint FAO/IAEA Centre

Live Q&A will be held after each presentation