The 17th Asian-Australasian Association of Animal Production Societies Animal Science Congress

Proceedings

22-25 AUGUST 2016
CONGRESS VENUE: FUKUOKA JAPAN

www.aaap2016.jp
Welcome Message

The 17th Animal Science Congress of AAAP will be held at Kyushu Sangyo University, Fukuoka, Kyusyu Area in Japan, from 22 to 25 August 2016. The aim of this congress is to provide a forum for the exchange of new information on animal sciences and technology, with a focus on successful strategies for the sustainable promotion of livestock considering the environment and welfare of livestock and human beings. At the same time, the congress will provide a venue for people from both inside and outside of the Asian Australasian region to make new contacts and renew friendships. Japanese Society of Animal Science is organizing the 17th AAAP Congress and is pleased to welcome everyone in this congress who is interested in animal science and production.

The venue of the congress, Fukuoka City, where tradition meets modernity, with delicious dishes and an excellent geographic location close to the Asian countries.

Prof. Mitsuhiro FURUSE
President of 17th AAAP
### Committee Members

- **Mitsuhiro FURUSE**  
  President
- **Seiichi KOIZUMI**  
  Chair of Committee and Finance
- **Kei HANZAWA**  
  Chair of Fund Raising, Public Relations, and Registration
- **Naomi KASHIWAZAKI**  
  Chair of Accommodations & Tour
- **Masahiro SATOH**  
  Chair of Program, Scientific Section and Publications
- **Koichi ANDO**  
  Chair of Venue, Social Culture & Protocol, and Exhibition
- **Keitaro YAMANOUCHI**  
  Secretary General

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alphabetical order / titles omitted
Outline of the congress

Congress Name
The 17th Asian Australasian Association of Animal Production Societies Animal Science Congress

Theme
Strive toward Progress on Sustainable Animal Production Contribute to Environment and Welfare for Human and Livestock

President
Mitsuhiro FURUSE (Professor, Animal & Marine Bioresource Sciences, Kyushu University)

Date
22-25 August, 2016

Venue
Kyushu Sangyo University
hotel nikko fukuoka

Official Website
http://www.aaap2016.jp/

JAPANESE SOCIETY OF ANIMAL SCIENCE (JSAS)
201, Nagatani Corporas, Ikenohata 2-9-4, Taito-ku, Tokyo 110-0008, Japan
FAX: +81-(0)3-3828-7649 / E-mail: support@jsas-org.jp

Secretariat for AAAP2016
C/o Convention Linkage, Inc.
2 Sanbancho, Chiyoda ku, Tokyo 102-0075, Japan
T/F: +81-(0)3-3263-8695 / E-mail: aaap2016@c-linkage.co.jp
Acknowledgements

Supporting Organizations

Association of Japanese Agricultural Scientific Societies
  Fukuoka City
  Fukuoka Prefecture
  Fukuoka Veterinary Medical Association
  Hokkaido Society of Livestock and Grassland Science
  Hokushinetsu Society of Animal Science
  Japan Embryo Transfer Society
  Japan Ethological Society
  Japan Poultry Science Association
  Japan Society for Immunology of Reproduction
  Japan Society of Reproductive Endocrinology
  Japan Veterinary Medical Association
  The Japanese Society of Animal Breeding and Genetics
  Japanese Society for Applied Animal Behaviour
  Japanese Society of livestock management
  The Japanese Society of Swine Science
  The Japanese Society of Veterinary Science
  Kansai Animal Science Society
  Kanto Society of Animal Science
  Kyushu Sangyo University
  Kyushu University
  SCIENCE COUNCIL OF JAPAN
  Society of Beef Cattle Science
  The Society for Reproduction and Development
  Tohoku Animal Science and Technology Society
  TOKAI SOCIETY OF ANIMAL PRODUCTION
  Warm Regional Society of Animal Science, Japan

Foundations

Fukuoka Prefecture
  Fukuoka City
  The Ito Foundation

JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

Grant-in-Aid for Publication of Scientific Research Results (JP16H00305)
Sponsors

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National Federation of Agricultural Cooperative Associations (ZEN-NOH)

Bronze Sponsor
The National Federation of Dairy Co-operative Associations
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Awardee of the 11th AAAP Animal Science Award

Sponsored by Japanese Society of Animal Science, Japan

Presented at the Opening Ceremony of 17th AAAP Animal Science Congress
on August 22, 2016 at Hotel Nikko, Fukuoka, Japan

Dr. In Kyu Han
Professor Emeritus
College of Agriculture and Life Sciences, Seoul National University, Korea

Prof. In K. Han graduated in Animal Science from Seoul National University in 1956, with M.Sc degree from the same institute in 1958 and was awarded Ph. D. in mono-gastric animal nutrition from Cornell University in 1965.

He has spent most of his working career at the Seoul National University of Korea (1965-2000). As is well known not only in Asia but also throughout the world, Prof. Han has been a dedicated teacher, researcher and administrator for more than 60 years in the area of animal agriculture. He trained more than 170 graduate students, many of whom took key positions and contributed to the development of animal science and industry in Korea and AAAP countries. As a scientist, Prof. Han published 670 papers in refereed journals, notably in the area of development and utilization of non-conventional animal feeds, amino acids, and other ingredients and supplements. Also he put tremendous effort to the development of Korean feed composition tables and feeding standards for major domestic animal species in Korea, which provided the key information and technologies necessary for the modernization of animal agriculture in Korea.

Prof. Han is the type of person with the vision and the ability to play key roles in engineering many master plans. Creation and establishment of AAAP in 1980 and AJAS in 1988 are two best examples. Prof. Han together with 8 pioneers including Y. Yamada from Japan and S. Jalaludin from Malaysia master-minded the establishment of AAAP and he played the key role in development of the organization until today. He invited the 3rd AAAP Congress to Seoul and organized the congress in 1985 as one of the most successful meetings in AAAP history. In addition Prof. Han tried very hard to establish the official journal of AAAP ever since its creation and successfully launched the first issue of AJAS in March, 1988. He nourished the journal, both in quantity and in quality, from its outset until 2001, when he stepped down as editor-in-chief to take another important position: President of the Korean Academy of Science and Technology. His international interest was extended to WAAP, for which he served vice-presidency for 5 years and for another 5 years as the president. The 8th WCAP which was organized under his leadership in Seoul in 1998 was, and still is, the most successful conference in WAAP history.

Within the context of science in Korea, he engineered the establishment of many local scientific societies and their journals: some of examples are Korean Society of Animal Science & Technology, Korean Society of Animal Nutrition & Feed and Korean Nutrition Society. Prof. Han took a number of important positions in Korea and is well-known for his achievement in these positions. He was elected as the president of Korean Academy of Science & Technology for 3 years term (2001-2004) and as the dean of Agricultural University of Seoul National University for 2 years (1989-1991) with tremendous achievement for those organizations and for the development of sciences including agricultural science. His affection and interest in fostering human resources for the development of animal science and industry in AAAP region continued even after his retirement. He established Hans Animal Life Science Foundation with the personal donation of almost one million dollar in 2000. The foundation has provided scholarship to not only Korean students, but also many other foreign students.

Moreover, his foundation sponsored award programs such as AAAP Animal Science Award and WAAP International Animal Agriculture Award, and international meetings (AAAP and WAAP).

In view of his contributions aforementioned, it should be considered that Professor In K. Han is eminently suitable for receiving the 11th AAAP Animal Science Award, since he is recognized and respected across AAAP region as a leading scientist and mentor.
Awardee of 4th Woogene B&G Award
Sponsored by Woogene B&G Co., Korea
Presented at the Opening Ceremony of 17th AAAP Animal Science Congress on August 22, 2016 at Hotel Nikko, Fukuoka, Japan

Dr. Takashi Nagai
Head, International Relations Office
Department of Research Planning and Coordination Headquarters, National Agriculture and Food Research Organization, Japan

In 1984 Dr. Takashi Nagai succeeded in the in vitro fertilization in pigs for the first time in the world, and got Ph D from Kyoto University. Since then, he has published about 200 papers in international journals and presented papers at many international congresses; he has been invited as a keynote speaker at many congresses and become one of the leaders in the field of animal biotechnologies such as in vitro fertilization, embryo transfer and production of cloned and transgenic animals in the world. Beside successful in vitro fertilization in pigs, it should be emphasized that he produced the clone bulls from frozen cloned embryos reconstructed using somatic cells for the first time in the world in 1999 and that he hypothesized that cloned mammals skip a reprogramming step but their offspring are normal because of proper reprogramming in sperm and oocytes of cloned animals; these papers have been cited by many papers. His achievements on animal biotechnologies were recognized so world-widely that he was selected as the first Asian president of International Embryo Technology Society which is the largest society related to Embryo Technology in the world. Also he is one of the founders of Asian Reproductive Biotechnology Society established in 2005.

From 1984 to 2013 he worked at National Institute of Livestock and Grassland Science (NILGS), NARO, his last position at NILGS was Animal Breeding and Reproduction Division Director. After retirement from NILGS, he moved to Korea and become WCU Professor at Seoul National University, and then moved to Taiwan to be Deputy Director of Food and Fertilizer Technology Center. From 1 April, 2016 he is Head of International Relations Office, Department of Research Planning and Coordination Headquarters, National Agriculture and Food Research Organization (NARO) and also adjunct professor of Meiji University and Kinki University. During his academic and professional career, he always focused on animal biotechnologies and international activities. From 1996 to 2012 he was a teacher of bovine reproductive technology training course for foreign trainees from developing countries including many Asian countries; this course was organized by National Livestock Breeding Center (NLBC). He had one-day class of about 8-12 trainees (students).

He begun to participate in the AAAP Animal Science Congress from 1996, and then presented many posters at the Congress. In 2006 he had an oral presentation at the 12th AAAP in Busan, Korea. He is organizing the NARO-FFTC Joint Workshop on “Mitigation of greenhouse gases and adaptation to climate change in livestock production systems” as the satellite workshop at this 17th AAAP Animal Science Congress.
Awardees of 13th AJAS/CAPI Award
Sponsored by Cargill Agrisupina Inc., Korea
Presented at the Opening Ceremony of 17th AAAP Animal Science Congress
on August 22, 2016 at Hotel Nikko, Fukuoka, Japan

Outstanding Research Award (Best Paper): Dr. Binghai Cao

Dr. Binghai Cao received BS in the Department of Animal Sciences at Hebei Agricultural University, China in 1985. After completion of his undergraduate study, Dr. Cao moved to Shinshu University, where he completed his MS degree in Animal Nutrition and Feed Sciences in 1995. He continued his study in Animal Nutrition and Feed Sciences at Gifu University, Japan for his PhD degree until 1998. After PhD course Dr. Cao appointed as Special Researcher (Post-Doc) of the Ministry of Education, Department of Agricultural Sciences, Shinshu University, Japan for 2 years (1998-1999) and served as the Special Researcher & Deputy Chief of Department of feed development, Research Institute of ITOCHU Feed Corporation, Japan until 2000, when he hired as Post-doc in College of Animal Sciences and Technology, China Agricultural University, China. Dr. Cao joined China Agricultural University as associate professor from 2002 and promoted to full professor in 2010. Dr. Cao’s research area is very diverse, but he is best known specialist in beef cattle nutrition and feed nutrients-beef quality interaction. Dr. Cao did many excellent work looking at Relationship between feed nutrients and differentiation of adipocytes and pre-adipocytes. The winning article for The 13th AAAP/CAPI Outstanding Research Award (Best Paper) was published in Asian Australas. J. Anim. Sci. Vol. 28 P156-165 with the title of “Sequencing and characterization of divergent marbling levels in the beef cattle (Longissimus dorsi Muscle) transcriptome”.

Outstanding Research Award (Most Cited Paper): Dr. Cheorun Jo

Dr. Cheorun Jo received his BS from Department of Animal Science, Seoul National University, Korea in 1991 and MS from the same institute with Muscle Food Science major in 1994. Then, he received Ph.D. with double majoring Meat Science and Food Science and Technology from Iowa State University, USA in 1999 after 1 and half years of working for private company in meat business sector, Korea. Dr. Jo had worked for Food Science and Biotechnology Division, Korea Atomic Energy Research institute (2000–2006) as a senior researcher, Department of Animal Science and Biotechnology, Chungnam National University (2006–2013) as an associate professor, and currently is working for Animal Biotechnology major, Seoul National University (2013– ) as a professor. His major research interest is quality and safety enhancement of animal origin foods including meat, egg, and their products. The winning article for The 13th AAAP/CAPI Outstanding Research Award (Most Cited Paper) was published in Asian Australas. J. Anim. Sci. Vol. 26 P772-779 with the title of “Comparison of quality traits of meat from Korean native chickens and broilers used in two different traditional Korean cuisines”.

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Distinguished Service Award: Dr. Xiangshu Piao

Dr. Xiangshu Piao is a Professor at Department of Animal Science and Technology, China Agricultural University (CAU) and Ministry of Agriculture Feed Industry Centre (MAFIC). She received PhD degree from Seoul National University, South Korea in 1999. She is a director of department of Education and Research in MAFIC. She published more than 120 scientific articles. She has been widely recognized for her dedicated research in monogastric nutrition, especially in the area of bio-active herbal extracts, and for professional teaching of “Swine Nutrition” course for undergraduate students in CAU. Dr. Piao currently serves as monogastric nutrition editorial board for Journal of Animal Science, and also participated review panel for 8 other international journals. Dr. Piao has acted as the reviewer of AJAS since 2005 and took a leading role in promoting AJAS in China and abroad.

Distinguished Service Award: Dr. Byung O Kwak

Dr. Byung O Kwak graduated from Animal Science Department at Seoul National University, Korea in 1981 and obtained his MS and PhD at the same institute specializing ruminant animal nutrition in 1991 and 1994, respectively. Dr. Kwak is currently CEO of Aniinfonet Co., Ltd. which is a system integration business in agricultural area. Before the establishment of Aniinfonet, he worked for TS Corporation as a R&D Chief for a number of years. As a nutritionist, he has provided technical consulting services for many private companies and cooperatives in Korea and China. Some of examples are: Kimhae Livestock Cooperative Federation, SF Co., Ltd., Farmsco Co., Ltd. and Cofeed Feed International in China. Dr. Kwak took a leading role in developing AJAS manuscript submission and handling software system in 2005 and operating the system from the very beginning of 2006 until the end of October 2014, when AJAS adopted a new web hosting service. AJAS is indebted highly to Dr. Byung O Kwak for his dedicated service.
# Program At a glance

## Monday, 22 August  [hotel nikko fukuoka]

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## Day 1: Tuesday, 23 August  [Kyushu Sangyo University]

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<td>Oral Session 07: Focus Session</td>
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<td>Oral Session 08: Animal Breeding (1)</td>
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<td>17:00</td>
<td>Oral Session 13: Focus Session</td>
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<td>Oral Session 14: Animal Breeding (2)</td>
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<td>Oral Session 10: Animal Reproduction (1)</td>
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<td>14:30</td>
<td>Oral Session 11: Animal Nutrition (Ruminants) (1)</td>
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<td>14:30</td>
<td>Oral Session 12: Animal Nutrition (Ruminants) (3)</td>
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<td>17:00</td>
<td>Oral Session 16: Animal Reproduction (2)</td>
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<td>17:00</td>
<td>Oral Session 17: Feeds &amp; Feeding (Ruminants) (1)</td>
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<td>17:00</td>
<td>Oral Session 18: Animal Nutrition (Non-Ruminants) (4)</td>
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<td></td>
<td><strong>Symposium 04</strong></td>
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<tr>
<td></td>
<td>Livestock revolution in Asia - Risk and opportunity -</td>
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<tr>
<td>14:30</td>
<td>Oral Session 10: Animal Reproduction (1)</td>
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<tr>
<td>14:30</td>
<td>Oral Session 11: Animal Nutrition (Ruminants) (1)</td>
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<tr>
<td>14:30</td>
<td>Oral Session 12: Animal Nutrition (Ruminants) (3)</td>
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<tr>
<td>17:00</td>
<td>Oral Session 16: Animal Reproduction (2)</td>
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<tr>
<td>17:00</td>
<td>Oral Session 17: Feeds &amp; Feeding (Ruminants) (1)</td>
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<tr>
<td>17:00</td>
<td>Oral Session 18: Animal Nutrition (Non-Ruminants) (4)</td>
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<td></td>
<td><strong>Poster Session 02</strong></td>
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<tr>
<td></td>
<td><strong>Poster Session 03</strong></td>
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<tr>
<td>16:30</td>
<td>Coffee Break</td>
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<tr>
<td>16:30</td>
<td>Coffee Break</td>
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</tbody>
</table>
### Day 2: Wednesday, 24 August  [Kyushu Sangyo University]

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00</td>
<td>S205</td>
<td>Workshop 05 Gastrointestinal functions and health in poultry</td>
</tr>
<tr>
<td>9:00</td>
<td>S206</td>
<td>Workshop 06 The effect of climatic factors on semen characteristics of Merino rams in a subtropical environment</td>
</tr>
<tr>
<td>10:00</td>
<td>S207</td>
<td>Symposium 09 The new role and needs of traditional livestock, such as goats and chickens</td>
</tr>
<tr>
<td>8:30</td>
<td>N202</td>
<td>Symposium 05 Mineral Toxic in Tropical Forage and Selected Tissue of Cattle</td>
</tr>
<tr>
<td>8:30</td>
<td>N203</td>
<td>Symposium 06 Animal Physiology</td>
</tr>
<tr>
<td>8:30</td>
<td>N204</td>
<td>Symposium 07 Current Status of Animal Biotechnology and the Application for Livestock Production</td>
</tr>
<tr>
<td>10:00</td>
<td>S304</td>
<td>AAAP Council Meeting</td>
</tr>
<tr>
<td>8:30</td>
<td>N303</td>
<td>Symposium 08 Future Beef Production in Asia</td>
</tr>
<tr>
<td>9:00</td>
<td>Circle Hall</td>
<td>Poster Session 04</td>
</tr>
<tr>
<td>10:00</td>
<td>ARTERIA</td>
<td></td>
</tr>
</tbody>
</table>

### Day 3: Thursday, 25 August  [Kyushu Sangyo University]

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30</td>
<td>S201</td>
<td>Oral Session 19 Milk, Eggs and By-products</td>
</tr>
<tr>
<td>8:30</td>
<td>S207</td>
<td>Oral Session 20 Feeds &amp; Feeding (Non-Ruminants) (1)</td>
</tr>
<tr>
<td>8:30</td>
<td>N201</td>
<td>Oral Session 21 Animal Breeding &amp; Genetics</td>
</tr>
<tr>
<td>8:30</td>
<td>N202</td>
<td>Oral Session 22 Poultry Science &amp; Industry (1)</td>
</tr>
<tr>
<td>8:30</td>
<td>N203</td>
<td>Oral Session 23 Animal Physiology &amp; Anatomy</td>
</tr>
<tr>
<td>8:30</td>
<td>N204</td>
<td>Oral Session 24 Feeds &amp; Feeding (Ruminants) (2)</td>
</tr>
<tr>
<td>8:30</td>
<td>N301</td>
<td>Oral Session 25 Animal Nutrition (Ruminants) (2)</td>
</tr>
<tr>
<td>8:30</td>
<td>N302</td>
<td>Oral Session 26 Animal Nutrition (Non-Ruminants) (5)</td>
</tr>
<tr>
<td>8:30</td>
<td>N303</td>
<td>Oral Session 27 Meat &amp; By-products (1)</td>
</tr>
<tr>
<td>8:30</td>
<td>Circle Hall</td>
<td>Oral Session 28 Feeds &amp; Feeding (Non-Ruminants) (2) / Pig Science &amp; Industry</td>
</tr>
<tr>
<td>8:30</td>
<td>ARTERIA</td>
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<tr>
<td>8:30</td>
<td>Sub Hall</td>
<td>Oral Session 29 Animal Genetics &amp; Diversity / Animal Reproduction</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 30 Meat &amp; By-products (1)</td>
</tr>
<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 31 Hygiene / Animal Physiology &amp; Anatomy</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 32 Feeds &amp; Feeding (Ruminants) (3)</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 33 Animal Nutrition (Ruminants) (3)</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 34 Animal Nutrition (Non-Ruminants) / Small Ruminants</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 35 Animal Nutrition (Non-Ruminants) (5)</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Oral Session 36 Meats &amp; By-products (1)</td>
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<tr>
<td>8:30</td>
<td></td>
<td>Coffee Break</td>
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<tr>
<td>10:00</td>
<td></td>
<td>LUNCH</td>
</tr>
<tr>
<td>Time</td>
<td>Session 35: Animal Welfare &amp; Health Management</td>
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<tr>
<td>14:00-16:00</td>
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<tr>
<td>14:00-16:00</td>
<td>Oral Session 36: Poultry Science &amp; Industry (2)</td>
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</tr>
<tr>
<td>14:00-16:00</td>
<td>Oral Session 37: Animal Reproduction (3)</td>
<td></td>
</tr>
<tr>
<td>14:00-16:00</td>
<td>Oral Session 38: Meat &amp; By-products (2) / Beef Cattle &amp; Industry</td>
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</tr>
<tr>
<td>13:30-16:30</td>
<td>Symposium 10: Impact, Adaptation and Mitigation of Heat Stress in Livestock</td>
<td></td>
</tr>
<tr>
<td>14:00-16:00</td>
<td>Oral Session 39: Feeds &amp; Feeding (Ruminants) (4)</td>
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<tr>
<td>14:00-16:00</td>
<td>Oral Session 40: Animal Nutrition (Ruminants) (4)</td>
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<tr>
<td>14:00-16:00</td>
<td>Oral Session 41: Environment &amp; Behaviour</td>
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<tr>
<td>14:00-16:00</td>
<td>Poster Session 06</td>
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<tr>
<td>LUNCH</td>
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<tr>
<td>18:00-19:00</td>
<td>Farewell Party</td>
<td></td>
</tr>
</tbody>
</table>

**Excursion**

13:00-14:00

**Closing Ceremony**

16:30-17:30

---

The 17th Asian-Australasian Association of Animal Production Societies Animal Science Congress
Building No.1

3rd Floor

4th Floor
Information for Chairs / Speakers / Presenters

Chairs

- Please be seated in the Chair’s seats located at the front right of your session room at least 10 minutes prior to the start of your session.
- The time indicator is set on the chair’s desk to indicate each speaker’s allotted time.
- Please manage the session time not to delay the schedule.
- All presentation, discussion and questions must be in English.

Oral Presenters

(1) PC Center

- Please check-in the PC Center (located on 1F, Building No.1) at least 45 min before your presentation.

<table>
<thead>
<tr>
<th>Submission Deadline</th>
<th>45min prior to the starting time of your session (or the day before)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC center open hours</td>
<td>7:30 - 18:30</td>
</tr>
<tr>
<td>23 August (Tue)</td>
<td>7:30 - 18:30</td>
</tr>
<tr>
<td>24 August (Wed)</td>
<td>7:45 - 13:00</td>
</tr>
<tr>
<td>25 August (Thu)</td>
<td>7:45 - 15:00</td>
</tr>
</tbody>
</table>

- Please make sure to be seated in the designated front seats 10 minutes prior to the start of your presentation.

(2) Presentation Guideline

- We will only accept computer-based PowerPoint presentations. Slide / Overhead projectors will NOT be available.
- Please bring your presentation on a USB Flash Memory Stick or on a CD-Rs. Please do not bring your own computer.
- Presentation must be made in PowerPoint readable in Windows.
- The computers provided for sessions will be running by Windows 7 operation system with the following application software installed:
  - Only Windows Media Player can be used to play movie files. (No audio file to be operated)
  - Use the above operating systems English fonts only.
  - If your presentation data is linked to other files (i.e. still or moving images, graphs, etc.), those linked files should also be saved in the same folder, and the links to be checked beforehand.
  - The resolution of the LCD projector for presentation is XGA (1024 x 768).
  - Non-Windows users should convert their presentation into a format that can be read in Windows, and bring this to the congress.
  - Please note that MOs, floppy disks, and CD-RWs cannot be accepted.
  - Please drop off your data at the PC Center by the appointed time.
  - All presenters are responsibility for checking virus at the PC center.
  - The Secretariat is responsible for discarding all copies of any data after the session.
Presentation Time

- Presentation time allocated for each presentation is as follows:

<table>
<thead>
<tr>
<th>Symposium</th>
<th>Oral presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please follow the instructions of the Chair.</td>
<td>8 min for presentation, 4 min for discussion.</td>
</tr>
</tbody>
</table>

Poster Presenters

1. Poster Panel
   - The secretariat will prepare a panel with your poster number. Pins will be provided along with the board. Placing your poster with any other materials (i.e. adhesive tapes) is prohibited.

2. Poster size
   - The size of the poster panel is W115 x H175 cm (see right image). Please prepare your posters to fit in this size. Each presenter is responsible for preparing their posters with the title, name(s) of author(s) and institution(s).

3. Poster Title
   - Please prepare a slip with title, name(s) of author(s), and institution(s), if not included in their posters.

4. Poster Discussion
   - The first half of each session will be allocated for presentations of odd numbered posters. During this time, presenters should be ready in front of their panel to make a presentation and answer questions. The second half of each session will be allocated for presentations of even numbered posters.

5. Schedule for Display & Mounting/Removing
   - Poster Presenters are asked to place their posters at the designated space and to follow the schedule below.
   - Any posters or handouts left behind after the removal time shall be discarded by the Secretariat.

<table>
<thead>
<tr>
<th>23 August (Tue)</th>
<th>Display time</th>
<th>Discussion</th>
<th>Mounting</th>
<th>Removing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poster 1</td>
<td>9:00-11:00</td>
<td>9:00-10:00</td>
<td>10:00-11:00</td>
<td>8:30-9:00</td>
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<tr>
<td>Poster 2</td>
<td>13:00-15:00</td>
<td>13:00-14:00</td>
<td>14:00-15:00</td>
<td>12:30-13:00</td>
</tr>
<tr>
<td>Poster 3</td>
<td>17:00-19:00</td>
<td>17:00-18:00</td>
<td>18:00-19:00</td>
<td>16:30-17:00</td>
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<thead>
<tr>
<th>24 August (Wed)</th>
<th>Display time</th>
<th>Discussion</th>
<th>Mounting</th>
<th>Removing</th>
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<tbody>
<tr>
<td>Poster 4</td>
<td>9:00-11:00</td>
<td>9:00-10:00</td>
<td>10:00-11:00</td>
<td>8:30-9:00</td>
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<thead>
<tr>
<th>25 August (Thu)</th>
<th>Display time</th>
<th>Discussion</th>
<th>Mounting</th>
<th>Removing</th>
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</thead>
<tbody>
<tr>
<td>Poster 5</td>
<td>8:30-10:30</td>
<td>8:30-9:30</td>
<td>9:30-10:30</td>
<td>8:00-8:30</td>
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<tr>
<td>Poster 6</td>
<td>14:00-16:00</td>
<td>14:00-15:00</td>
<td>15:00-16:00</td>
<td>13:30-14:00</td>
</tr>
</tbody>
</table>
Welcome Reception

- To be held at the time, date and venue shown below:
- 17:30-19:30, Monday, 22 August (*doors open at 17:30)
- ‘Tsukushi”, 3F, hotel nikko fukuoka
- 2-18-25 Hakata Ekimae, Hakata-ku, Fukuoka, 812-0011, Japan
  (TEL) +81-(0)92-482-1111
- Participants may be ushered to a satellite venue if the main venue reaches capacity.
- Please complete registration, and attach your Name Badge before entering the venue.

Farewell Party

- To be held at the time, date and venue shown below:
- 18:00-20:00, Thursday, 25 August (* Doors open at 17:30)
- “ARTERIA”, 1F, Central Building.

Program for accompanying persons

- Accompanying persons can participate in the following 2 programs.
- Please apply at the “Information” desk at the congress registration desks.
- Applications will be accepted on a first-come-first-served basis.
- Please make sure you wear your accompanying person’s name badge.

Come-and-Try Origami Course

- 23 August (Tue.)
- 13:00-14:00 / 14:00-15:00 / 15:00-16:00
- Capacity: 15 participants each session
- Free
- Venue: N407, Building No.1

Come-and-Try Casual KIMONO Course

- 25 August (Thu.)
- 12:30-13:15 / 13:15-14:00 / 14:00-14:45 / 15:00-15:45 / 15:45-16:30
- Capacity: 4 participants each session
- Free
- Venue: N407, Building No.1
Excursion

- Excursions require advance reservations. Reservations have now closed.
- Participants with reservations should meet as follows. Attendance will be checked from 30 minutes prior to the appointed meeting time. Participants arriving late will not be able to join the excursion.

**Factory Tour Course**
- Please be at the meeting place and marked off the attendance register by 12:40.
- Meeting place: Room N202
- The excursion will break up at about 18:00. (The excursion will not return to the Kyushu Sangyo University. It will disperse in Fukuoka City.)

**Saga Karatsu Course**
- Please be at the meeting place and marked off the attendance register by 13:00.
- Meeting place: Room N203
- The excursion will break up at about 18:00. (The excursion will not return to the Kyushu Sangyo University. It will disperse in Fukuoka City.)

**Dazaifu Course**
- Please be at the meeting place and marked off the attendance register by 13:20.
- Meeting place: Room N204
- The excursion will break up at about 18:15. (The excursion will not return to the Kyushu Sangyo University. It will disperse in Fukuoka City.)
List of collaborators

**Fukuoka Prefecture**
- Osamu IDE
- Kazuhiko IMAMURA
- Kazuki ISHIBASHI
- Yoshihiro ISOZAKI
- Motoyuki MAEDA
- Hiroyuki MATSUO
- Yuiko MORINACA
- Masahiro NAGANO
- Seiji NAGASUE
- Kazuhisa NAKAMURA
- Sumiko Natsuuki
- Hiroaki RYUOU
- Seitarou SHIKITA
- Hitomi SHIRAKAWA
- Tomitarou TAKATA
- Katsuyuki YAMASHITA

**Fukuoka Veterinary Medical Association**
- Kazuto HIRAYAMA
- Sei KURASHIGE
- Isao KURAUCHI
- Haruo KUSABA
- Takashi NOHARA

**Kagoshima University**
- Yoshitaka NAKANISHI
- Ichiro OSHIMA
- Keiji TAKAYAMA

**Kyushu University**
- Vishwajit SCHOWDHURY
- Fuminori KAWABATA
- Mako NAKAMURA
- Yutaka NAKANO
- Wataru MIZUNOYA
- Masataka SHIMOJO
- Tomoki SOH
- Hideyuki TAKAHASHI
- Shinobu YASUO

**Kyushu Sangyo University**
- Koichi ANDO

**Ministry of Agriculture, Forestry and Fisheries**
- Keiji FUSHIMI

**University of Miyazaki**
- Seiji IEIRI
- Yasuyuki ISHII
- Genki ISHIGAKI
- Tetsuo MORITA
- Tomonori NAKANISHI
- Toshihiro TAKAHASHI
- Manabu TOBISA
- Tadaaki TOKUNAGA
- Yasuhiro TSUZUKI

**University of the Ryukyus**
- Yoshimi IMURA

alphabetical order / titles omitted
PREVENT FMD & BIRD FLU IN JAPAN

Help us Continue to Stop Foot-and-Mouth Disease and Avian Influenza Contamination on Japanese Farms

Japan is a currently a country free of foot and mouth disease (FMD) (http://www.oie.int/en/animal-health-in-the-world/official-disease-status/fmd/list-of-fmd-free-members/). FMD is an infectious, highly contagious, and sometimes fatal viral disease that affects cloven-hoofed animals such as cattle, goats, and sheep. Yet FMD continues to be a dire threat to Japan's ranchers and other animal farmers. Japan did in fact experience an FMD outbreak in 2010, in Miyazaki Prefecture, Kyushu. This had a highly damaging impact on Japanese farmers raising livestock, and a great number of cattle and pigs had to be culled to prevent a widespread epidemic.

Avian influenza (commonly, bird flu) is a viral infection spread among birds, including poultry (http://www.cdc.gov/flu/avianflu/ or http://www.who.int/mediacentre/factsheets/avian_influenza/en/). It has potentially calamitous effects for Japan's poultry farmers.

NOTE: Foreign visitors are essentially prohibited from entering animal farms immediately after arriving in Japan. There is a mandatory waiting period of at least 1 week (3 months for public farms) after arrival. Participants from FMD-contaminated countries should take special caution and be advised of preventive measures.

Thank you for helping us continue to keep Japan free of FMD and bird flu

Photo credits
FMD (pigs, middle): http://www.adf.com.cn/BaiKa/1/103.html
Bird flu (chickens): https://www.youtube.com/watch?v=T_6D_gphvKE
Keynote Lecture Program

Monday, 22 August  [hotel nikko fukuoka]

**Keynote Lecture**

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Speaker(s)</th>
<th>Institution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-01</td>
<td>The origin and genetic diversity of Japanese Wagyu</td>
<td>Hideyuki Mannen</td>
<td>Laboratory of Animal Breeding and Genetics, Graduate School of Agricultural Science, Kobe University, Japan</td>
</tr>
<tr>
<td>L-02</td>
<td>The application of heart rate reactions associated with behavior test in the predict of training success of guide dogs</td>
<td>Fang Han, Zijuanc Zhou, Jingyu Wang</td>
<td>Dalian Medical University, China</td>
</tr>
<tr>
<td>L-03</td>
<td>Empowering research capability for the sustainable animal production, environment and human resource development</td>
<td>Metha Wanapat, Anusorn Cherdthong, Sungchhang Kang, Chaowait Mapato</td>
<td>Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand; Agricultural Unit, Department of Education, National Institute of Education, Cambodia</td>
</tr>
<tr>
<td>L-04</td>
<td>The future of sheep production in New Zealand</td>
<td>Hugh T. Blair</td>
<td>AL Rae Centre for Genetics and Breeding, VABS, Massey University, New Zealand</td>
</tr>
</tbody>
</table>
# Symposium Program

**Day 1: Tuesday, 23 August [Kyushu Sangyo University]**

<table>
<thead>
<tr>
<th>Symposium 01</th>
<th>Tuesday, 23 August 8:30-11:30</th>
<th>Room S207</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY-01 <strong>Empowerment of Goat Farmer Through Mutual Trust</strong></td>
<td>Organizer: Tanri Giling Rasyid</td>
<td></td>
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<tr>
<td></td>
<td>Animal Science of Hasanuddin University, Indonesia</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symposium 02</th>
<th>Saturday, 24 August 8:30-11:30</th>
<th>Room N202</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY-02 <strong>Comparative Extraction and Analysis of Antioxidant Properties and Protein Potentials to The Total Scavenging Capacity from Indigenous Honey Bees of Indonesia</strong></td>
<td>Organizer: Firman Jaya</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Department of Animal Food Technology, Faculty of Animal Husbandry, University of Brawijaya, Indonesia</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Symposium 03</th>
<th>Tuesday, 23 August 8:30-12:30</th>
<th>Room N302</th>
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</thead>
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<tr>
<td>SY-03 <strong>Animal Nutrition and Metabolism</strong></td>
<td>Organizer: Tormu Matsui</td>
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<td>Japanese Society for Animal Nutrition and Metabolism, Japan</td>
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<th>Symposium 04</th>
<th>Tuesday, 23 August 12:00-19:00</th>
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<td>SY-04 <strong>CADIC International Symposium Livestock revolution in Asia -Risk and opportunity-</strong></td>
<td>Organizer: Tomoyuki Kawashima</td>
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<td>Miyazaki University, Japan</td>
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Day 2: Wednesday, 24 August  [Kyushu Sangyo University]

Symposium 05

SY-05 Mineral Toxic in Tropical Forage and Selected Tissue of Cattle
Organizer: Syamsuddin Hasan
Animal Science of Hasanuddin University, Indonesia

Symposium 06

SY-06 Animal Physiology
Organizer: Achadiyah Rachmawati
University of Brawijaya, Indonesia

Symposium 07

SY-07 Current Status of Animal Biotechnology and the Application for Livestock Production
Organizer: Hiroshi Kagami
Faculty of Agriculture, Shinshu University, Japan

Symposium 08

SY-08 Future Beef Production in Asia
Organizer: Takafumi Gotoh
Kyushu University, Japan

Symposium 09

SY-09 The new role and needs of traditional livestock, such as goats and chickens
Organizer: Katsuyuki Yamashita
Fukuoka Prefecture, Japan

Day 3: Thursday, 25 August  [Kyushu Sangyo University]

Symposium 10

SY-10 Impact, Adaptation and Mitigation of Heat-Stress in Livestock
Organizer: Vishwajit Chowdhury
Faculty of Arts and Science, Kyushu University, Japan
## Workshop Program

### Day 1: Tuesday, 23 August  [Kyushu Sangyo University]

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<th>Tuesday, 23 August 8:30-19:00 Room S201</th>
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| **WS-01** Mitigation of greenhouse gases and adaptation to climate change in livestock production systems | Organizer: Akio Takenaka  
Food and Fertilizer Technology Center (FFTC) in Taiwan, Taiwan, Republic of China |

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<th>Workshop 02</th>
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| **WS-02** Dairy production with local feed resources in Asian countries | Organizer: Taei Obitsu  
The Research Center for Animal Science, Hiroshima University, Japan |

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<tr>
<th>Workshop 03</th>
<th>Tuesday, 23 August 12:00-14:00 Room S205</th>
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| **WS-03** Using lesser galangal (Alpinia officinarum Hance) on pig diet | Organizer: Taei Nang Nguyen  
Hung Vuong University, Vietnam |

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<tr>
<th>Workshop 04</th>
<th>Tuesday, 23 August 12:00-14:00 Room S206</th>
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| **WS-04** Present situation and future prospect of goat production and the future direction in Asian-Australasian countries | Organizer: Naoshige Abe  
College of Agriculture Tamagawa University, Japan |
Day 2: Wednesday, 24 August  [Kyushu Sangyo University]

Workshop 05

Wednesday, 24 August  9:00-11:00  Room S205

WS-05  Gut mucosal functions and health in poultry

Organizer: Yukinori Yoshimura

Research Center for Animal Science, Hiroshima University, Japan

Workshop 06

Tuesday, 23 August  9:00-11:00  Room S206

WS-06  The effect of climatic factors on semen characteristics of Merino rams in a subtropical environment

Organizer: Ismaya Natawihardja

Faculty of Animal Science Universitas Gadjah Mada Indonesia, Indonesia
Oral Session Program

Day 1: Tuesday, 23 August  [Kyushu Sangyo University]

Oral Session 01: Focus Session  Animal Breeding, Genetics & Reproduction

Chair: Yoshinobu Uemoto  National Livestock Breeding Center

Tuesday, 23 August  9:00-11:00  Room N201

0-01-1 Improvement the accurate genetic estimation of milk yield trait by addition of wind speed to THI in crossbred Thai Holstein
Watcharapong Teawyuneyong1, Monchai Duangjinda1, Sayan Buaban2, Vibuntita Chankitisakul1, Wuttigrai Boonkum1
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Thermo-tolerance Dairy Cattle Research Group, Khon Kaen University, Thailand.

0-01-2 Estimation of additive genetic variance due to each autosome for carcass traits in Japanese Black cattle
Shinichiro Ogawa1, Hirokazu Matsu1da, Toshio Watanabe1, Yoshikazu Sugimoto3, Hiroaki Iwaisaki3
1 Graduate School of Agriculture, Kyoto University, Japan, 2 National Livestock Breeding Center, 3 Shirakawa Institute of Animal Genetics

0-01-3 Analysis of realized heritability and other genetic parameters in a long-term selection experiment for non-destructive deformation in White Leghorns
Olivier Gervais1, Keijiro Nirasawa2, Christian Vincenot2, Yoshitaka Nagamine1, Kazuyuki Moriya1
1 Kyoto University, Graduate School of Informatics, 2 NARO Institute of Livestock and Grassland Science,
3 Nihon University, College of Bio-resource Sciences

0-01-4 Accuracy of Genomic-Polygenic Prediction for Milk Yield and Fat Percentage in the Thai Dairy Cattle Population
Danai Jattawa1, Skorn Koonawootitririon1, Mauricio A. Elzo1, Thanathip Suwanaso Dee1
1 Department of Animal Science, Faculty of Agriculture, Kasetsart University, Thailand,
2 Department of Animal Sciences, University of Florida, USA

0-01-5 Screening of embryo secreted factors using bovine elongated embryos
Hironori Masaka1, Sayed Ali Askar Musavi1,2, Md. Rashedul Islam1, Nobuhiko Yamauchi1
1 Department of Animal and Marine Bioresource Sciences, Faculty of Agriculture, Kyushu University, Japan,
2 Department of Animal Science Agriculture Faculty Balkh University Afghanistan,
3 Department of Genetics and Animal Breeding, Faculty of Veterinary and Animal Science, Hajee Mohammad Danesh Science and Technology University, Bangladesh

0-01-6 Genetic fluctuation study with microsatellite markers in germplasm-preserved Wuji Black Muscovy
Yi-Ying Chang1,2, Jeng-Fang Huang3, Chih-Feng Chen2, Hsiu-Chou Liu1
1 Ilan Branch, Livestock Research Institute, Council of Agriculture, Executive Yuan, Taiwan,
2 Department of Animal Science, National Chung Hsing University, Taiwan,
3 Livestock Research Institute, Council of Agriculture, Executive Yuan, Taiwan

0-01-7 Establishment and characterization of bovine derived placenta stem cells
Kang-You Liu, Shao-Yu Peng
National Pingtung University of Science and Technology
0-01-8 Dynamics of spermatogenetic cells on proliferation and desquamation during seasonal reproductive cycle in wild mice
Jun Ito
Graduate school of science and technology in Niigata University

0-01-9 Development of an in vitro model to study uterine functions using in vitro cultured rat uterine explants
Md. Rashedul Islam, Yuka Yoshii, Yuko Ikeguchi, Mohamed El-Sharawy, Nobuhiko Yamauchi
1 Department of Animal and Marine Bioresource Sciences, Faculty of Agriculture, Kyushu University, Japan,
2 Department of Genetics and Animal Breeding, Faculty of Veterinary and Animal Science, Haje Mohammad Danesh Science and Technology University, Bangladesh,
3 Animal Production Department, Faculty of Agriculture, Kafrelsheikh University, Egypt

0-01-10 The effects of different oocyte mtDNA haplotypes on somatic cell nuclear transfer embryos
Kanokwan Srirattana, Justin C. St. John
1 Centre for Genetic Diseases, Hudson Institute of Medical Research, Australia,
2 Department of Molecular and Translational Science, Monash University, Australia.
3 MitoStock Pty. Ltd, Australia

Oral Session 02: Focus Session  Animal Welfare & Health Management, others

Chair: TBD

0-02-1 Estimation of nitrogen, phosphorus and potassium flows in dairy cattle production in western China
Lin Wang, S. T. Takashi Tanaka, Hiroki Anzai, Yuki Hama, Kazato Oishi, Chagan Irib, Hajime Kumagai, Tatsuya Inamura, Hiroyuki Hirooka
1 Graduate School of Agriculture, Kyoto University, Japan,
2 Biotechnology Research Center, Kunming University of Science and Technology, China

0-02-2 Influence of age on beef calves' play behaviour in an indoor and outdoor environment of a free barn
Yi Zhang, Ken-ichi Takeda
1 Shinshu University, Graduate School of Agricultural Science, Japan,
2 Shinshu University, Academic Assembly, Institute of Agricultural, Japan

0-02-3 A study on the correction factors between temperature-humidity index and body surface temperature for Hanwoo heifer (Bos taurus coreanae)
SeYoung Jang, Na-Yeon Kim, Sung-Jin Kim, Jung-Hwan Jeon, Won-Mo Cho, Byeong-Tae Jeon, Sang-Ho Moon
1 Division of Food Bio Science, Konkuk University, 2 Nation Institute of Animal Science, ADA, Korea

0-02-4 Milk Acidification to Control the Growth of Salmonella Dublin in Infected Milk
Alysia Parker, Katrina Bosward, John House, Mark Hazelton, Paul Sheehy
1 The University of Sydney, Faculty of Veterinary Science, School of Life and Environmental Sciences

0-02-5 Degradation of oleic acid and conversion to biogas during a mesophilic anaerobic process
Yuki Matsumoto, Yasuhiro Fukuda, Yutaka Nakai, Chika Tada
Laboratory of Sustainable Animal Environmental Science, Graduate School of Agricultural Science, Tohoku University, Japan

0-02-6 THE CHARACTERIZATION OF ADIPOSE TISSUE VIA A METABOLIC SYNDROME MINIPIG MODEL
Chia-Yu Wang, Twin-Way Wu, Jyun-Wei Chen, Sin-Jin Li, Ching-Yi Chen
National Taiwan University
O-02-7 Differential levels of activity and stress response between Djungarian hamster (P. sungorus) and Robosovskii hamster (P. roborovskii)
Hiromi Ikeda, Takeshi Yamaguchi, Momoko Kodaira, Mohammad A. Bahry, Vishwajit S. Chowdhury, Shinobu Yasuo, Mitsuhiro Furuse
1 Laboratory of Regulation in Metabolism and Behavior, Faculty of Agriculture, Kyushu University,
2 Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University

O-02-8 The Role of Skeletal Muscle Glucocorticoid Receptors in Photoperiodic Response of Depression-like Behaviors
Ayako Tashiro, Ryosei Goda, Satomi Shibata, Yusuke Takai, Tsuyoshi Otsuka, Tatsuhito Uchiwa, Mitsuhiro Furuse, Shinobu Yasuo
Laboratory of Regulation in Metabolism and Behavior, Faculty of Agriculture, Kyushu University, Japan

O-02-9 Effect of postnatal photoperiod on body weight and metabolomics profiles in skeletal muscle and plasma in mice
Tatsuhito Uchiwa, Yusuke Takai, Ayako Tashiro, Satomi Shibata, Mitsuhiro Furuse, Shinobu Yasuo
Laboratory of Regulation in Metabolism and Behavior, Faculty of Agriculture, Kyushu University, Japan

O-02-10 Effect of mastitis on pregnancy function in prepartum goats
Nozomi Kodama, Yukinori Yoshimura, Naoki Isobe
Hiroshima University

Oral Session 03: Animal Nutrition (Non-Ruminants) (1)
Tuesday, 23 August 9:00-11:00 Room N303

O-03-1 Effect of Natural Acidifier and Phytobiotic Addition in Non-Encapsulation and Encapsulation Form on Egg Quality of Laying Hens
Maya Septtanau, Muhammad Halim Natsir, Osfar Sjofjan
1 Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Taiwan,
2 Faculty of Animal Husbandry, University of Brawijaya, Indonesia

O-03-2 Is eleutherine (Eleutherine americana) potential as feed additive for poultry?
Rusdi Rusdi, Asrili Hasanuddin, Rosliati Arief
Faculty of Animal Husbandry and Fisheries, Tadulako University, Palu Indonesia

O-03-3 UTILIZATION EFFECT OF BREAD WASTE AS CORN SUBSTITUTION ON HYBRID DUCK PERFORMANCES
Irfan Djunaidi, Dini Hardmi
1 The Assessment Institute for Agricultural Technology, Indonesia,
2 Faculty of Animal Husbandry, Brawijaya University, Indonesia

O-03-4 Responses of hens fed high levels of selenium from selenium-enriched kale sprout
Anut Chantiratikul, Lalita Borisuth, Orawan Chinrash, Piyanete Chanturatikul
1 Faculty of Technology, Mahasarakham University, 2 Faculty of Science, Mahasarakham University

O-03-5 Effect of water extract of Green Grass Jelly leaves (Premna oblogifolia merr) on Intestinal Characteristics and Performances of Laying Hen
Eko Widodo, Edhy Sudjarwo, Anna Lidiyawati
University of Brawijaya Indonesia
EFFECT OF MINERAL MIXTURES SUPPLEMENTATION IN DRINKING WATER ON CARCASS QUALITY, GUT MORPHOLOGY AND GUT MICROFLORA OF BROILER CHICKENS

Nurhazirah Shazali, Teck Chwen Loh, Hooi Ling Foo, Jalaludin Syed

Department of Animal Science, Faculty of Agriculture Universiti Putra Malaysia, Malaysia.
Institute of Tropical Agriculture, Universiti Putra Malaysia, Malaysia.
Department of Bioprocess Technology, Faculty of Biotechnology and Biomolecular Sciences Universiti Putra Malaysia, Malaysia.

Effects of Multi-probiotics and Synbiotics on Laying Ducks Performance and Egg Quality

Srisuda Sirilaophaisan, Paiwan Punyakaew, Pongsathorn Gunun, Thachawech Kimprasit

Nattaya Banglab
Rajamangala University of Technology Isan, Sakon Nakhon Campus.
K.M.P. Biotech Co., LTD.

Effect of Dried Tomato Meal (Solanum lycopersicum) in Diet on Performance and Egg Quality of Native Chickens

Jein Rinny Leke, Jet Saartje Mandey, Jacqueline T Laihad, Friets Ratulangi

Sam Ratulangi University Animal Husbandry Faculty

Digestibility Value of Broiler Diet Containing Fresh Mulberry (Morus alba) Leaves

Jet Saartje Mandey, Cathriena A Rahasia, Zebedeus Dady

Sam Ratulangi University Animal Husbandry Faculty

EFFECTS OF SUPPLEMENTAL EFFECTIVE MICROORGANISM ON PERFORMANCE, SOME HISTOLOGICAL AND BLOOD PARAMETERS OF BROILER

Ladine Celik, Mustafa Cikrki, Ugur Serbester, Yusuf Uzun, Fatma Yenilmez, Mehmet Celik, Osman Gulnaz, Hasan Rustu Kutlu

Cukurova University Faculty of Agricultural Department of Animal Science.
Cukurova University Faculty of Medicine Department of Basic Medical Sciences.
Cukurova University Vocational School of Tufanbeyli.
Cukurova University Faculty of Fisheries Department of Fisheries and Seafood Processing Technology.
Cukurova University Faculty of Education Department of Primary Education

Oral Session 04: Focus Session Animal Nutrition, Feeds and Feeding

Chair: Taketo Obitsu, Hiroshima University

How do Thai consumers respond to quality of pork with different marbling levels?: a preliminary study in different age ranges

Sawankamol Noidad, Rutcharin Umsupavamch, Suntaree Suwanskhan, Ronachai Sithigripong, Channporn Chaisap

Department of Animal Production Technology and Fisheries, Faculty of Agricultural Technology, King Mongkut’s Institute of Technology Ladkrabang, Thailand.
Department of Product Development, Faculty of Agro-Industry, Kasetsart University.
Department of Agricultural Education, Faculty of Industrial Education, King Mongkut’s Institute of Technology Ladkrabang, Thailand

THE ROLE OF FORAGES IN REDUCING HOUSEHOLD LABOUR DEMANDS OF CATTLE FEEDING DURING THE DRY SEASON IN CAMBODIA

Katherine Ashley, James Robert Young, Kea Pha, Sothoeun Suon, Peter Andrew Windsor, Russell David Bush

Faculty of Veterinary Science, The University of Sydney, Australia.
Department of Animal Health and Production, Cambodia
0-04-3 Influence of Season on the Yield and Nutritional Composition of Indigofera zollingeriana at Different Cutting Intervals
Loretta Romero¹, Edgar Orden², Neal Del Rosario³, Jovani Jo Galamgam⁴, Rhanny Gonzales⁵
¹Benguet State University, ²Central Luzon State University

0-04-4 Enrichment the Nutritive Value of Cassava Top Silage with Molasses and Urea Supplement Using Gas Production Technique
Sungchhang Kang¹, Metha Wanapat², Ahkarapon Nunoi³
¹Agricultural Unit, Department of Education, National Institute of Education, Cambodia.
²Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand.

0-04-5 The Effect of Euglena (Euglena gracilis) Supplementation on Intake, Digestibility and Nitrogen Balance in Sheep
Aemiro Ashagrie¹, Watanabe Shota², Suzuki Kengo³, Hanada Masaki⁴, Umetsu Kazutaka¹, Nishida Takehiro¹
¹Obihiro University of Agriculture and Veterinary Medicine, ²Euglena Co., Ltd, Japan

0-04-6 Influence of premix containing mangoesteen peel powder and banana flower powder on rumen microbial population in swamp buffaloes
Thiwakorn Ampapon¹, Metha Wanapat², Kampanat Phesatcha¹, Sungchhang Kang³
¹Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand.
²Agricultural Unit, Department of Education, National Institute of Education, Cambodia.

0-04-7 Effect of crude glycerin in diets on growth performance, ruminal pH and blood metabolites of Kamphaeng Saen steers
Nirandom Nakdaeng, Lerchat Boonek, Siritat Buaphan, Taweeporn Raungprim, Sutisa Majarune, Wisut Maitreejet
Department of Animal Science, Faculty of Agriculture at Kamphaeng Saen, Kasetsart University, Kamphaeng Saen Campus

0-04-8 Effects of Difructose Anhydride III Supplementation to Colostrum Replacers on Immunoglobulin G Absorption and Serum Immunoglobulin G in Newborn Calves
Aung Htun¹, Yasuhiro Suzuki², Yuki Koike², Tadashi Sato², Masaaki Hanada²
¹United Graduate School of Agricultural Science, Iwate University, Japan.
²Obihiro University of Agriculture and Veterinary Medicine, Japan

0-04-9 Effects of mycosorbent mixed with turmeric (Curcuma longa) powder to ameliorate the toxic effects of mycotoxins contaminated corn in ducks
Kantaphat Rattanasinthuphong¹, Pawadee Pakdee², Bundit Tengjaroenkul³
¹Department of Animal science, Faculty of Agriculture, Khon Kaen University, Thailand.
²Faculty of Veterinary Medicine, Khon Kaen University, Thailand.

0-04-10 Effects of fermentation period on chemical composition and in vitro digestibility of spineless cactus silage
Hitomi Ichimura¹, Satoshi Ishikawa², Makoto Kondo³, Yoshiaki Hayashi¹,²
¹Graduate School of Agriculture, Meijo University, ²Faculty of Agriculture, Meijo University.
³Graduate School and Faculty of Bioresources, Mie University
Oral Session 05: Focus Session Poultry Science, Dairy Science and Industry

Tuesday, 23 August 11:30-13:30 Room N301

Chair: TBD

O-05-1 Expression And Localization Of Cyclooxygenases In The Oviduct Of Laying Hens During The Ovulatory Cycle
Moustafa Elhamouly1, Yukinori Yoshimura1,2, Naoki Isobe1,2
1 Hiroshima University, Graduate School of Biosphere Science, 2 Hiroshima University, RCAS

O-05-2 Changes on bursal B cells during embryonic development and early life after the hatching in chicken
Kwang Hyun Ko1,2
1 Department of Agricultural Biotechnology and Research Institute for Agriculture and Life Sciences, Seoul National University, Korea, 2 Biomodulation major and Center for Food Bioconvergence, Seoul National University, Korea

O-05-3 Effects of probiotics on antimicrobial peptides and pro-inflammatory cytokines expression in response to LPS in the cecum of broiler chicks
Elsayed Mohammed1, NAOKI ISOBE, YUKINORI YOSHIMURA1,2
1 Graduate School of Biosphere Science, Hiroshima University, 2 RCAS, Hiroshima University

O-05-4 CpG oligodeoxynucleotide from Streptococcus thermophilus induces type 2 innate lymphoid cells
Takuma Okajima1, Yosihana Yamamoto1,2, Takasu Ogita1, Takeshi Shimosato1,2,4
1 Graduate School of Agriculture, Shinshu University, 2 Interdisciplinary Graduate School of Science and Technology, Shinshu University, 3 Research Fellow of the Japan Society for the Promotion of Science (JSPS), 4 Institute for Biomedical Sciences, Shinshu University

O-05-5 Investigation of possible mechanisms of Lactobacillus kefiri of ameliorating hyperglycemia
Shun-Yu Huang, Ming-Ju Chen, Shih-Hung Wei
Department of Animal Science and Technology, National Taiwan University

O-05-6 Anti-Obesity Effect of Lactobacillus casei on High-Fat Diet-Induced Obesity
Yung-Tsung Chen1, Yu-Chun Lin2,3, Jin-Seng Lin2,3, Ming-Ju Chen1
1 Department of Animal Science and Technology, National Taiwan University, Taiwan, 2 Livestock Research Institute, Council of Agriculture, Executive Yuan, Taiwan, 3 SynbioTech Incorporation, Taiwan

O-05-7 Doi Moi (reformation) of production yield on dairy milk and rice in Vietnam
Hiromitsu Moriyama1, Xuan Luu Tang2
1 The Open university of Japan, 2 Ba Vi cattle and forage research Center, National Institute of Animal Science

O-05-8 Cognitive and Physiological Effects of Microalgae-DHA Egg Consumption related to the Go/No-Go task in Healthy Thai Men.
Mongkol Kaewsuat1, Ariya Sarikaphuti1, Thantkitip Sarinatwanchai1, Prapas Patchanee2
1 School of Nursing and Regenerative Medicine, Mae Fah Luang University, Thailand, 2 Faculty of Veterinary Medicine, Chiang Mai University

O-05-9 Construction of a platform for the identifying adulteration in fresh milk
Hsin-Wen Chang1, Ming-Ju Chen1, Cheng-Chih Hsu2, Ming-Lun Chi2
1 Department of Animal Science and Technology, National Taiwan University, 2 Department of Chemistry, National Taiwan University, 3 Department of Tourism and Hospitality Management, Kainan University

O-05-10 Sweet Threshold of Lysozyme from Indonesian Kampung Chicken and Cihateup Duck
Wulandari Zakiah1, Fardiaz Dedi1, Thenawijaya Maggy2, Dewi Yuliana Nancy2
1 Department of Animal Production and Technology, Faculty of Animal Science, Bogor Agricultural University, 2 Department of Food Science and Technology, Faculty of Agriculture and Technology, Bogor Agricultural University
Oral Session 06: Animal Nutrition (Non-Ruminants) (2)

Tuesday, 23 August 11:30-13:30 Room N303

Chair: Wahyu Widodo, University of Muhammadiyah Malang

0-06-1 Influence of Fermented Pumpkin Supplementation on Growth Performance and Feed Utilization in Thai Native Pradu Hang Dum Chicken
Chayut Dongpleethun, Somchart Thana, Choke Sorachakura, Norakamol Laorodpham, Kavintra Khangkhan, Khanchai Danmek

1 Phayao Livestock Research Station, Department of Livestock Development, Thailand,
2 Program of Animal Science, School of Agriculture and Natural Resources, University of Phayao, Thailand,
3 Program of Animal Science, Faculty of Food and Agricultural Technology, Pibulsongkram Rajabhat University, Thailand,
4 Program of Biotechnology, School of Agriculture and Natural Resources, University of Phayao, Thailand

0-06-2 Effect of Proportion of Fatty Acids from Soybean Oil and Beef Tallow on Fatty Acids Accumulation in Egg Yolk
Putthaporn Pumrojana, Suwit Terapuntuwat, Parwadee Pakdee, Nitchanan Chukerd, Nantiya Saeliew, Watchara Ninphet

1 Division of Animal Science, Faculty of Science and Technology, Muban Chombueng Rajabhat University,
2 Department of Animal Science, Faculty of Agriculture, Khon Keen University

0-06-3 Effect of Low Protein Amino Acid Supplementation on Growth Performance and avANT Gene Expression in the Muscle of Betong Chicken
Wiriya Loongyal, Jiraporn Marayat, Panwadee Sopannarath, Chalyapoom Bunchasak

1 Department of Animal Science, Faculty of Agriculture, Kasetsart University, Bangkok, Thailand 10900,
2 School of Science, Walailak University, Thasala, Nakhonsithammarat, 80160, Thailand

0-06-4 Effect of Low Protein Amino Acid-Supplemented Diets on Growth Performance and Carcass Characteristics in Betong Chicken (KU Line)
Jiraporn Marayat, Choawit Rakangthong, Parwadee Sopannarath, Chalyapoom Bunchasak, Wiriya Loongyal

Department of Animal Science, Faculty of Agriculture at Kasetsart University, THAILAND

0-06-5 FEEDING VALUE OF FERMENTED SOYBEAN MEAL AND HYDROLYZED PEPTONE IN BROILERS
Rhona Nina R. Reyes, Rommel C. Sulabo

Animal Nutrition Division, Animal and Dairy Sciences Cluster, University of the Philippines Los Baños, Philippines

0-06-6 Effect of Coconut Oil Supplementation in Diet on Performance, Carcass Quality and Coccidia Control in Broilers
Chayanan Pukkung, Parwadee Pakdee, Bundit Tengjaroenkul, Padsakorn Pootthachaya

1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Department of Medicine, Faculty of Veterinary Medicine, Khon Kaen University, Thailand

0-06-7 The Combination of Coconut Oil and Turmeric Powder Supplementation in Diets on Performance, Carcass and Coccidia Control in Broilers
Padsakorn Pootthachaya, Parwadee Pakdee, Bundit Tengjaroenkul, Chayanan Pukkung

1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Department of Medicine, Faculty of Veterinary Medicine, Khon Kaen University, Thailand

0-06-8 Comparative Effect of Corn and Whole Wheat in Diets on Egg Production and Egg Quality of Laying Hens
Theerawit Poeikhampha, Khanittha Saikhai, Choawit Rakangthong, Chalyapoom Bunchasak

Kasetsart University
O-06-9 Effect of Corn Substitution with Noodle Waste and Fortified Noodle Waste on Growth Performance and Carcass Quality of Broilers
Ahmad Windu Bahari1,2, Lathifah Fitriyani Dewi1, Muhammad Halim Natsir2, Osfar Sjofjan2
1 Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Taiwan,
2 Faculty of Animal Husbandry, University of Brawijaya, Indonesia

O-06-10 DIETARY FIBER DIGESTIBILITY AND APPARENT METABOLIZABLE ENERGY IN CASSAVA MEAL AND CASSAVA RESIDUE PELLET FED TO BROILERS
Ung Putheany, Hazel Grace D. Masilungan, Rommel C. Sulabo
Animal Nutrition Division, Animal and Dairy Sciences Cluster, University of the Philippines Los Baños, Philippines

Oral Session 07: Focus Session Animal Nutrition (Non-Ruminants) (1)
Tuesday, 23 August 14:30-16:30 Room N201
Chair: Anut Chantiratikul Mahasarakham University

O-07-1 Effect of L-leucine in ovo injection on post hatch performance in broiler chicks
Guofeng Han1, Hui Yang1, Mohammad A Bahry1, Phuong V Tran1, Phong H Do1, Mitsuhiro Furuse1, Vishwajit S Chowdhury2
1 Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioscience and Bioenvironmental Science, Kyushu University, Japan,
2 Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan

O-07-2 Effects of standardized ileal digestible (SID) methionine and cysteine levels on growth performance and blood parameter of pigs
Chong Hau Goh1, Teck Chwen Loh1,2, Hooi Ling Foo1,4
1 Department of Animal Science, Faculty of Agriculture, Universiti Putra Malaysia,
2 Institute of Tropical Agriculture, Universiti Putra Malaysia, Malaysia,
3 Department of Bioprocess Technology, Faculty of Biotechnology and Biomolecular Sciences,
4 Institute of Biological Science; Universiti Putra Malaysia, Malaysia

O-07-3 Effects of different dietary oils and L-Arginine supplementation in diet on performance, intestinal morphology and serum immunoglobulin level in broiler
Jannatara Khatun1,2, Teck Chwen Loh1, Henny Akit1, Hooi Ling Foo2, Rosfarizan Mohamad1
1 Department of Animal Science, Faculty of Agriculture, University Putra Malaysia, Malaysia,
2 Department of Animal Science and Nutrition, Chittagong Veterinary and Animal Sciences University, Bangladesh

O-07-4 Effects of Standardized Ileal Digestible Valinedysine Ratio on Performance, Milk Composition and Plasma Indices of Lactating Sows
Yetong Xu, Zhikai Zeng, Xiaoxia Xu, Qiyu Tian, Xiaokang Ma, Shenfei Long, Xiangshu Piao
China Agricultural University

O-07-5 Angelica gigas Nakai root powder supplementation improves growth performance and modulates splenic heat shock proteins of broiler chickens
Wenchun Marie Lumbers1, Emil Joseph Vergara1, Seung-Hak Yang2, Seong-Gu Hwang1
1 Department of Animal Life and Environmental Science, Hankyong National University, Korea,
2 National Institute of Animal Science, Rural Development Administration, Korea

O-07-6 EFFECT OF SUPPLEMENTAL ZINC SOURCES AND ZINC FEEDING REGIMEN ON GROWTH PERFORMANCE, DIARRHEA OCCURRENCE AND GUT INTEGRITY IN NURSERY PIGS
Noel B. Lumbo1, Therese A. Collantes1, Rommel C. Sulabo1
1 Animal and Dairy Sciences Cluster, University of the Philippines Los Baños, Philippines,
2 College of Veterinary Medicine, University of the Philippines Los Baños, Philippines.
O-07-7  Effect of Dried Banana (Musa sapientum L.) in Diet on Growth Performance and Intestinal Morphology of Nursery Pigs
Tanachot Pengsawad, Chaiyapoom Bunchasak, Choawit Rakangthong, Theerawit Poeikhampha
Kasetsart University

O-07-8  Effect of Dietary Fish Oil in Combination with Tomato Powder on Egg Polyunsaturated Fatty Acids Profile of Native Laying Hens
Faizal Andri¹, Aji Sukoco², Taufich Hilman², Eko Widodo¹
¹ Postgraduate Student, Faculty of Animal Husbandry, University of Brawijaya, Indonesia.
² Alumni, Faculty of Animal Husbandry, University of Brawijaya, Indonesia.

O-07-9  Effect of α-Galactosidase Supplementation in Diet on Egg Production and Egg Quality of Laying Hens
Chonladda Harnkaew, Chaiyapoom Bunchasuk, Choawit Rakangtong, Theerawit Poeikhampha
Kasetsart University

O-07-10 BIOLOGICAL EFFICACY OF L-METHIONINE AS SUPPLEMENTAL METHIONINE SOURCE IN BROILER DIETS
Krystalene S. Decena, Rommel C. Sulabo
Animal Nutrition Division, Animal and Dairy Sciences Cluster, University of the Philippines Los Baños, Philippines

Oral Session 08: Animal Breeding (1)
Tuesday, 23 August 14:30-16:30 Room N202

Chair: TBD

O-08-1 Contribution of genotyped cow inclusion in the Holstein bull reference population on genomic evaluation
Yoshinobu Uemoto, Takefumi Osawa, Junichi Saburi
National Livestock Breeding Center

O-08-2 PHENOTYPIC RELATIONSHIPS AMONG SOMATIC CELL COUNT AND UDDER TRAITS IN DAIRY GOATS
Mauricio Valencia-Pozadas¹, Lisa Shepard⁶, Abner J Gutirrez-Chavez¹, Alma A Lechuga-Aranna¹, César A Angel-Sahuquín¹
¹ Life Science Division, CIS, University of Guanajuato, ² American Dairy Goat Assoc. USA

O-08-3 THE STUDY OF QUANTITATIVE AND QUALITATIVE TRAITS FOR RABBIT F1 CROSSBREDS
Mudawamah Mudawamah¹, Irawati Dinasari Retnaningtyas¹, M Zainul Fadii¹, Gatot Ciptadi¹
¹ Faculty of Animal Science, University of Islam Malang, ² Faculty of Medicine, University of Islam Malang, ³ Faculty of Animal Husbandry, Brawijaya University

O-08-4 BALI CATTLE OUTPUT INSTALLATION OF POPULATION IN THE AREA POTENTIAL AS A SOURCE OF BALI CATTLE BREEDING
Agus Budiarto, Luqman Hakim, VM Ani Nurgiartiningungsih, Gatot Ciptadi
Faculty of Animal Husbandry, Brawijaya University

O-08-5 POPULATION STRUCTURE AND PERFORMANCE OF PO CATTLE, CASE STUDY IN CITY OF PROBOLINGGO, EAST JAVA, INDONESIA
Veronica Margareta Ani Nurgiartiningungsih¹, Agus Budiarto¹, Suprih Bambang Siswijono¹, Retno Wanda Saras¹
¹ University of Brawijaya Malang, ² Department of Agriculture Probolinggo
O-08-6 Improvement of Bali Cattle Performance by Additional Concentrate in Sumbawa Island, Indonesia
Luqman Hakim, Veronica Margareta Ani Nurjatiningsih, Agus Budiarso
University of Brawijaya

O-08-7 Growth and Milk Production of Thai Milking Zebu Cattle
Krongkaew Borisutsawat¹, Mattaneeya Sarakul¹, Sutida Onsongchun¹, Danai Jattawa², Siriyut Khemisavat², Thanathip Suwanasoppee², Skorn Koonawootitririron²
¹Bureau of Animal Husbandry and Genetic Improvement, Department of Livestock Development, 
²Department of Animal Science, Faculty of Agriculture, Kasetsart University,
³Department of Animal Science, Faculty of Agriculture and Technology, Naithon Phanom University

O-08-8 Genetic Polymorphism at Growth Hormone Receptor and Prolactin locus in Friesian Holstein Crossbred Cows
Sucik Maylinda, Tri Eko Susilorini
Brawijaya University

O-08-9 PHENOTYPE AND GENOTYPE CHARACTERISTIC OF FILIAL ETAWAH DAIRY GOAT
Tri Eko Susilorini
Brawijaya University

O-08-10 ROLE OF ARTIFICIAL INSEMINATION ON THE PROPAGATION OF IMPROVED BREEDS OF GOAT IN NORTHERN LUZON, PHILIPPINES
Jonathan Nayga, Aubrey Joy Balbin
Isabela State University Echague, Philippines

Oral Session 09: Livestock Economics (1)
Tuesday, 23 August 14:30-16:30 Room N203

Chair: Shiu Yin Leu Livestock Research Institute, COA, Executive Yuan.

O-09-1 FACTORS INFLUENCE ON SMALLHOLDER DAIRY FARMING INCOME (Case Study in Malang, Indonesia)
Hari Utami, Sapti Mainling, Ainun Seruni
Brawijaya University

O-09-2 EFFECT OF HUMAN CAPITAL AND PRICE LEVEL PERIOD ON THE BROILER FARMER INCOME IN SURAKARTA INDONESIA
Nurtini Sudji, Haryadi Trisakti, Jafendi Hasoloan Purba Sidaelog, Abdul Hakim
Faculty of Animal Science Universitas Gadjah Mada Indonesia

O-09-3 THE DETERMINATION OF BUSINESS SCALE OF COW FARMERS USING BREAK EVEN POINT ANALYSIS IN KEBAR DISTRICT OF WEST PAPUA PROVINCE
Trisivi Wahyu Widajati¹, Andoyo Supriyantoro², Onesimus Yoku², Iriani Sumpe²
¹Papua University

O-09-4 Indigenous Chicken and Fighting Cock Production Systems in Thailand
Rangsun Charoensook, Sonthaya Numthuam, Tossaporn Incharoen, Wandee Tatrakoon, Attachai Kewsi
Naresuan University, Faculty of Agriculture Natural Resources and Environment
O-09-5  Cutting Costs and Retail Cuts Incomes in Holstein Bull Carcasses
Hasan Cicek, Murat Tandogan, Recep Kara
1 Afyon Kocatepe University, Faculty of Veterinary Medicine Department of Animal Health Economics and Management,
2 Afyon Kocatepe University, Faculty of Veterinary Medicine, Department of Food Hygiene and Technology

O-09-6  PERSPECTIVE OF ORGANIC FEED MATERIAL AVAILABILITY AS A MAIN COMPONENTS IN THE BROILER FEED AT MALANG REGENC
Adi Sutanto, WAhyu Widodo, Imbang Dwi Rahayu
University of Muhammadiyah Malang

O-09-7  A Comparison of Cattle Fattening System With and Without Credit in Two Districts in East Java, Indonesia
Gusti Ayu Putu Mahendri, Scott Waldron, Malcolm Wegener, R. A. Cram
1 Indonesian Centre for Animal Research and Development, Bogor Indonesia,
2 The School of Agriculture and Food Science, University of Queensland, Australia

O-09-8  AN INVESTIGATION OF ENTREPRENEURIAL ORIENTATION TO IMPROVE COMPETITIVENESS OF BEEF CATTLE FARMING IN KEBUMEN DISTRICT, INDONESIA
Mochamad Sugarto
Jenderal Soedirman University

O-09-9  Decreases of milk yield after conception of mature dairy cattle in tropical environment
Kanokwan Noikhrua, Wassana Chaisri, Paramintra Vinitchaikul, Wittaya Suriyasathaporn
Chiang Mai University

O-09-10  PIGS DEVELOPMENT ANALYSIS AND TECHNOLOGIES INTRODUCTION IN THE VILLAGE OF TEMPOK
Fietje S.G. Oley, A H S Salendu, F.H Elly
Faculty of Animal Husbandry University of Sam Ratulangi

Oral Session 10: Animal Reproduction (1)
Tuesday, 23 August 14:30-16:30 Room N301

Chair: Takeshi Osawa  University of Miyazaki

O-10-1  REPRODUCTIVE PERFORMANCES OF HOLSTEIN FRIESIAN HEIFERS AND COWS INSEMINATED WITH SEXED SEMEN
Buddhi Chamara Kalansooriya, H M Gayani Priyadarshani Herath
1 Department of Livestock Production, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka,
2 Sri Lanka,
3 New Zealand Farm, Sri Lanka

O-10-2  Bovine oviducts express higher macrophage migration inhibitory factor on the post-ovulation phase than on the estrous and corpus luteum phases
Nahar Asrafun, Hiroya Kadokawa
Yamaguchi University Faculty of Veterinary Medicine

O-10-3  Gas Sensors For Electronic Nose And Their Application To Determine Estrus Phase In Cattle.
Pudji Astuti, Claude Moné Airin, Slamet Widiyanto
Faculty of Veterinary Medicine, Universitas Gadjah Mada, Indonesia
O-10-4  EFFECTS OF FEED SUPPLEMENT ON THE ARTIFICIAL INSEMINATION EFFICIENCY OF BEEF COWS UNDER SMALL FARMS CONDITION IN INDONESIA
A. Latief Toleng¹, Muhammad Yusuf², Surya Darma³
¹ Hasanuddin University, Indonesia, ² Department of Livestock Services, Indonesia

O-10-5  SPERM FERTILITY DIFFERENCES ONGOLE CROSSBRED CATTLE IN EGG YOLK TRIS AMINOMETHAN AND EGG YOLK CAUDA EPIDIDIMIS DILUTERS DURING COOLING PROCESS
Trinil Susilawati, Nolasco Dacosta, Nurul Isnaini, M Nur Ihsan, Priyo Sugeng Winarto, Aulia Puspita Anugra Yekti
Animal Husbandry Faculty of Brawijaya University Indonesia

O-10-6  Potential of Evaporative System Improving Pregnancy Rate in Recipient Heifers after Embryo Transfers in Thailand
Umaporn Rungroekrit, Jatuporn Kajaysri
Clinic for Obstetrics Gynecology Andrology and Artificial Insemination of Domestic Animals, Faculty of Veterinary Medicine, Mahanakorn University of Technology, Thailand

O-10-7  Factor affecting sperm uptake into the sperm storage tubules in Japanese quail (Coturnix japonica)
Tomohiro Sasanami¹², Mei Matsuzaki¹², Shusei Mizushima³
¹ Shizuoka University, ² Gifu University, ³ University of Toyama

O-10-8  Effect of Mangosteen (Garcinia mangostana) Pericarp Filtrate in Skim Milk Diluter on Bali Bull Diluted Semen Quality at room temperature
Nurul Isnaini, Trinil Susilawati, Aulia Puspita Anugra Yekti
Animal Husbandry Faculty of Brawijaya University Indonesia

O-10-9  The Quality of Chilled Semen Ongole Crossbred Cattle with the Replacement of Source Albumin in Cauda Epididymal Plasma-2 Diluter
Aulia Puspita Anugra Yekti¹, Enike Dw Kusumawati², Nisaus Sholikah³, Muchamad Luthfi³, Lukman Affandhy³, Dicky Pamungkas³, Kuswati Kuswati³, Aswah Ridhowi³, Herni Sudarwati³, Nurul Isnaini³, Trinil Susilawati³
¹ Animal Husbandry Faculty of Brawijaya University Indonesia,
² Animal Husbandry Faculty of Kanjuruhan University, Indonesia,
³ Beef Cattle Research Station, Pasuruan Indonesia

O-10-10  Association between number of follicles at the onset of Shortsynch and fertility in Japanese Black cows
Takeshi Osawa¹, Masashi Tanaka¹, Yuii Tsubakishita¹, Takashi Ekawa¹, Koichiro Hemmi², Ikuo Kobayashi², Mizuho Uematsu², Go Kitahara¹
¹ Laboratory of Theriogenology, University of Miyazaki, ² Sumiyoshi Livestock Science Station, University of Miyazaki,
³ Department of Production Medicine, NOSAI Miyazaki

Oral Session 11: Animal Nutrition (Ruminants) (1)
Chair: Indah Prihartini, Faculty of Agriculture and Animal Science, University of Muhammadiyah Malang

O-11-1  Effect of Kaempferia galanga L. on in vitro nutrients digestibility, ruminal fermentation and methane production
Asih Kumiau², Widodo³, Wayan T Artama³, Lies Mira Yuslati³
¹ Faculty of Animal Science Universitas Gadjah Mada, ² Faculty of Veterinary, Universitas Gadjah Mada
O-11-2 EVALUATION ON INNOCULUM OF CYTOPHAGA Sp AS PROBIOTIC IN RUMINANT BY IN VITRO GAS PRODUCTION APPROACH
Indah Prihartini
Faculty of Agriculture and Animal Husbandry, University of Muhammadiyah Malang

O-11-3 The Effect of Rejected Soybean Supplementation with Different Treatments on Onggole Crossbred Cattle Feed
Bambang Suhartanto¹, Ristiamto Utomo¹, Satria Budi Kusuma¹, Dian Astuti²
¹Faculty of Animal Science, Gadjah Mada University, ²Center of Agrotechnology Innovation, Gadjah Mada University

O-11-4 Effects of nitrate, extracted chitosan or shrimp shell meal on degradability and in Vitro gas production
Thao Nguyen The¹,², Metha Wanapat²
¹Department of Animal Science and Veterinary Medicine, Faculty of Agriculture and Natural Resources, An Giang University, Vietnam,
²Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand

O-11-5 Existing Feed Balance in Mixed Farming Systems in an Agricultural City of Probolinggo in East Java of Indonesia
Ifar Subagiyo¹, Veronica Margareta Ani Nurgiartiningsih¹, Suprih Bambang Siswijono¹, Mashudi Mashudi¹
University of Brawijaya

O-11-6 METAGENOMIC ANALYSES OF RUMEN FIBROLYTIC BACTERIA SWAMP BUFFALO
Anjas Asmara Samsudin¹,², Maisara Amin¹, Teck Chwen Loh¹,²
¹Department of Animal Science, Faculty of Agriculture, Universiti Putra Malaysia, Malaysia,
²Institute of Tropical Agriculture, Universiti Putra Malaysia, Malaysia

O-11-7 The Characteristic of Microencapsulation of Sesame Oil with Different Coating Materials and its effect on in vitro rumen fermentation
Sri Suharti, Farisa Diftairani, Raden Noviani, Asep Sudarman, Suryahadi Suryahadi
Department of Nutrition and Feed Technology, Faculty of Animal Science, Bogor Agriculture University

O-11-8 Bacterial communities of milk and cow shed samples in relation to changes of the somatic cell count
Haoming Wu¹, Yusuke Sugimoto², Yuji Tanabe³, Takeshi Turuda¹, Naoki Nishino¹
¹Okayama University, ²Okayama Livestock Research Institute

O-11-9 THE EFFECT OF HARVESTING INTERVAL ON NUTRITIVE VALUE OF DWARF ELEPHANT GRASS (Pennisetum purpureum CV Mott)
Artharini Irsyammawati
Animal Husbandry Faculty Brawijaya University

O-11-10 Somatic embryogenesis and regeneration of Brachiaria decumbens from immature inflorescences
Nilo Suseno¹, Fitria Gemma Tyasari¹, Rani Agustina², Bambang Suwignyo¹, Bambang Suhartanto¹, Nafiati Umami¹
¹Dept. of Animal Nutrition Faculty of Animal Science Gadjah Mada University Indonesia,
²Dept. of Agronomy Faculty of Agriculture Gadjah Mada University Indonesia
Oral Session 12: Animal Nutrition (Non-Ruminants) (3)

Chair: Sung Woo Kim  North Carolina State University

0-12-1 The effects of dietary spirulina (Spirulina platensis) on growth performance, skin color and nutritional digestibility in Thai native chicken
Buaream Maneewan¹, Tonglian Buwjoom¹, Koh-en Yamauchi²
¹ Faculty of Animal Science and Technology, Maejo University, Thailand;
² Faculty of Agriculture, Kagawa University, Japan

0-12-2 Effect of Palm Oil and Free Fatty Acid Substitution in Diets on Growth Performance and Carcass Yield of Broilers
Pitsiree Sirimart, Chaiyapoom Bunchasak, Choawit Rakangthong, Theerawit Poeikhampha
Kasetsart University

0-12-3 COMPARISON OF NUTRITION CONTENT OF ORGANIC FEED FROM VARIOUS AREAS IN EAST JAVA AS POTENTIAL EXPLORATION OF LOCAL POULTRY FEED
Wahyu Widodo, Imbang Dwi Rahayu, Adi Sutanto
University of Muhammadiyah Malang

0-12-4 THE EFFECT OF USING OF FERMENTATION ORGANIC FEED ON KAMPONG CHICKEN HEALTH STATUS
Imbang Dwi Rahayu, Adi Sutanto, Wahyu Widodo
University of Muhammadiyah Malang

0-12-5 High acid value rendering oil can replace soybean oil in broiler feeds
Cheng-Wei Wang¹, Kuo-Lung Ku², Cheng-Yang Chuang³, Kuo-Lung Chen¹
¹ Department of Animal science, National Chiayi University, Taiwan;
² Department of Applied Chemistry, National Chiayi University, Taiwan

0-12-6 Comparative the Dietary Protein and Energy Basis in Feed Formulation on Production Performance and Carcass Yield of broilers
Suwipa Buttarach, Chaiyapoom Bunchasuk, Kanokporn Poungpong, Theerawit Poeikhampha
Kasetsart University

0-12-7 Effect of Nutrient Density and Phytase Supplementation in Diets on Growth Performance, Carcass Yield and Bone Condition of Broilers
Wararat Arparjasakul, Chaiyapoom Bunchasuk, Choawit Rakangtong, Theerawit Poeikhampha
Kasetsart University

0-12-9 Improving broiler growth performance through dietary supplementation with Aspergillus niger-fermented wheat bran
Ming-Tsung Chen¹, Ya-Wen Kang¹, Tsang-Chyi Shiah¹, Kuo-Lung Chen¹
¹ Department of Animal Science of National Chiayi University;
² Department of Wood Based Materials and Design of National Chiayi University

0-12-10 Effect of Folic Acid and Docosahexaenoic Acid (DHA) Supplementation in diet and Incorporation in Egg of Laying Hens
Nuttawut Krutthai¹, Chaiyapoom Bunchasak¹, Naruemol Sangsawang¹, Wiriya Loongyai¹,
Chanwit Kaewtaze¹, Theerawit Poeikhampha¹
¹ Department of Agricultural Technology and Development, Faculty of Agricultural Technology, Chiang Mai Rajabhat University, Thailand,
Oral Session 13: Focus Session Animal Nutrition (Non-Ruminants) (2)

Chair: TBD

0-13-1 Effects of plant soot on the growth performance, immunological indices, intestinal morphology and microflora in weaned piglets

Liqi Wang, Bing Dong, Lin Zhu, Chucai Peng, Limin Gong

China Agricultural University

0-13-2 Responses in colostrum production and immunoglobulin concentrations to conjugated linoleic acid fed to multiparous sows during late gestation

Fei Wu1, Peili Li1, Lili Bai1, Hu Liu1, Changhua Lai1, Philip Thacker2, Fenglai Wang1

1 State Key Laboratory of Animal Nutrition, Ministry of Agriculture Feed Industry Centre, China Agricultural University, China

2 Department of Animal and Poultry Science, University of Saskatchewan, Canada

0-13-3 Effect of long-term feeding of n-6 to n-3 fatty acid ratio in laying hen diets on yolk fatty acid accumulation

Thanan Yaemphet, Wittawat Molee, Suthisa Khempaka

Suranaree University

0-13-4 EFFECTS OF SUPPLEMENTING PIG DIETS WITH DIETARY IRON LEVELS, TRYPTOPHAN AND PYRIDOXINE ON PERFORMANCE OF WEANING PIGLETS

WANTAMAS JANTASIN1, LIANG CHOU HSIA2

1 Faculty of Animal Science and Technology, Maejo University, Thailand,

2 Department of Tropical Agriculture and International Cooperation, National Pingtung University of Science and Technology, Taiwan (ROC)

0-13-5 Effect of Different Fat Types With or Without Emulsifier on Growth Performance and Meat Quality in Broiler Chicken

Nur Fadzmira Huda Mohd Faudzi1, Teck Chwen Loh12, Henny Akit1

1 Department of Animal Science, Faculty of Agriculture, University of Putra Malaysia,

2 Institute of Tropical Agriculture, Universiti Putra Malaysia, Malaysia

0-13-6 Tannin Is a Key Negative Factor in Determination and Prediction of Energy Content in Sorghum Grains for Growing Pigs

Long Pan, Ping Li, Xiaokang Ma, Yetong Xu, Qiyu Tian, Ling Liu, Defa Li, Xiangshu Piao

State Key Laboratory of Animal Nutrition, Ministry of Agriculture Feed Industry Centre, China Agricultural University

0-13-7 Effects of Tetrabasic Zinc Chloride on the Performance, Diarrhea Incidence, Antioxidant Capacity, Intestinal Morphology and Fermentation Profile of Weaned Piglets

Tian Xia, Wenqing Lai, Yiqiang Chen, Miaomiao Han, Jumei Xie, Limin Gong, Liling Zhang

State Key Laboratory of Animal Nutrition, Ministry of Agriculture Feed Industry Centre, China Agricultural University

0-13-8 Effects of Deoxynivalenol on Cell Proliferation, Apoptotic Lesion and DNA Damage in Spleen of Taiwan Country Chickens

Stephanie S. Chen, Mei-Fong Lin

National Taiwan University

0-13-9 Effects of replacement of dietary fish meal by fermented meat-and-bone meal on growth performance of broilers

Yi-Tai Hsu, Kuo-Lung Chen

Department of Animal Science, National Chiayi University, Taiwan
O-13-10  EFFECT OF INCREASING LEVELS OF HYDROLYZED PEPTONE IN EARLY CHICK DIETS ON PRODUCTION PERFORMANCE, EXCRETA QUALITY AND DIET ECONOMICS
Marie Fe M. Iranzo, Jeff C. Ebio, Krystaene S. Decena, Rommel C. Sulabo
Animal Nutrition Division, Animal and Dairy Sciences Cluster, University of the Philippines Los Baños, Philippines

Oral Session 14: Animal Breeding (2)
Tuesday, 23 August  17:00-19:00  Room N202

Chair: Takdir Saili  Universitas Halu Oleo, Indonesia

O-14-1 Characteristics of Egg Production, Fertility and Hatchability of F1 Local Village Chicken Cross in Southeast Sulawesi, Indonesia
Takdir Saili, Syam Rahadi, Ambullah Pagala, Rusli Badaruddin, La Ode Nafiu, Ali Bain
Universitas Halu Oleo, Indonesia

O-14-2 ALLELIC FREQUENCY OF 24-BP INDEL (INSERTION-DELETION) IN PROMOTER PROLACTIN GENE OF PAPUA LOCAL CHICKENS
Sintje Lumatauw, M. Affan Mu'in
University of Papua

O-14-3 Genetic parameters of Body Weight Gain and Growth Curve Parameter Traits in Korean Native Chicken
Manjula Prabuddha, Hee-Bok Park, Dong-Won Seo, Nu-Ri Choi, Shil Jin, Sung Jin Ahn, Jun-Heon Lee
1 Division of Animal and Dairy Science, Chungnam National University, Korea, 2 Department of Information Statistics, RINS, Gyeongsang National University, Korea

O-14-4 The effect of GH gene and IGF-I gene on dominant effect of bodyweight of Korat chicken
Kaewnakian Poomtiwa, Petladda Kuadsanha, Rujjira Bunnom, Pongchan Na-Lampang, Surintron Boonanuntasarn, Amonrat Molee
School of Animal Production Technology, Institute of Agricultural Technology, Suranaree University of Technology

O-14-5 Variance Components and Heritability Estimates on Carcass Traits in Betong Chicken (KU Line)
Panatda Bungsrisawat, Sornthep Tumwasom, Wiriya Loongyalai, Sasitorn Nakthong
Department of Animal Science, Faculty of Agriculture, Kasetsart University, Thailand.

O-14-6 Relationship between eggshell strength and egg shape in White Leghorns
Yoshitaka Nagamine, Yoko Suzuki, Olivier Gervais, Keijiro Nirasawa
1 Nihon University, 2 Kyoto University, 3 NARO Institute of Livestock and Grassland Science

O-14-7 COMBINING ABILITY OF GROWTH TRAITS IN BLACK-BONE (BLACK-BONE HMQG, BLACK-BONE CHINESE) AND THAI NATIVE CHICKENS (PRADU-HANG DAM)
Piriyaporn Sungkhapreecha, Monchai Duangjinda, Banyat Laopaiboon, Wuttigrai Boonkum
1 Research and development network center for animal breeding (native chicken), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand, 2 Graduate school, Khon Kaen University, Thailand

O-14-8 Estimation of Growth Curve Parameters in Betong Chicken (KU Lines)
Panwadee Sopannarath, Araya Jeanmas
1 Department of Animal Science, Faculty of Agriculture, Kasetsart University, Thailand, 2 Faculty of Science and Technology, Prince of Songkla University, Pattani Campus, Thailand.
0-14-9 Effect of housing system on expression of antioxidant enzyme and heat stress genes in commercial native chicken
Natthaya Duangkhlang1, Monchai Duangjinda1,2, Kanop Sujikara1, Banyat Laopaiboon1, Yupin Phasuk1,2
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Research and Development Network Center for Animal Breeding (Native Chicken), Khon Kaen University, Thailand.

0-14-10 Cholesterol of Black-Bone, Thai Native and Their Crossbreds Chickens
Sukanya Charoenruang1,2, Banyat Laopaiboon1, Wuttigrai Boonkum1,2, Sajee Kanharaseem1,2,
Pitcharat Sanchaisunya1,2, Monchai Duangjinda1,2
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Research and Development Network Center for Animal Breeding (Native Chicken), Khon Kaen University, Thailand.

Oral Session 15: Livestock Economics (2) / Poultry Science & Industry

Chair: TBD

0-15-1 The performance of livestock extension agent in empowerment of farmers at Pinrang Regency, South Sulawesi, Indonesia
AGUSTINA ABDULLAH
Department of Sosio-Economic of Animal Science, Hasanuddin University, Indonesia

0-15-2 PRODUCTION SYSTEMS AND INCOME GENERATION FROM THE BLIGON GOAT FARMING IN THE RURAL COMMUNITY IN GUNUNGKIDUL OF YOGYAKARTA PROVINCE, INDONESIA
Rini Widiati
Faculty of Animal Science, Universitas Gadjah Mada

0-15-3 COMMUNICATION FLOWS AND ADOPTION OF INNOVATION IN GOAT FARMING, PURWOREJO, INDONESIA
Budi Guntoro1, Subejo2, Wahyudi3
1 Universitas Gadjah Mada Faculty of Animal Science, 2 Universitas Gadjah Mada Faculty of Agriculture, 3 Office of Agriculture, Livestock and Fishery, Regency of Purworejo

Mujtahidah Angriani Ummul Muzayyanah, Suci Paramitasari Syahlani, Rini Widiati
Faculty of Animal Science, Universitas Gadjah Mada

0-15-5 The Analysis of Cost and Benefit of the Managerial Accounting on the Dairy Goat Farms in Taiwan(2012,10~2013,9)
Shiu yin Leu
Management Division Livestock Research Institute, COA, Executive Yuan.

0-15-6 DECREASING BLOOD LIPID PROFILE AND INCREASING WELFARE ON DUCKS WITH PHYTOBIOTIQUES SUPPLEMENTATION IN THE DIET
Ismoyowati Ismoyowati, Mochamad Mufti
Universitas Jenderal Soedirman

0-15-7 Reproductive Performance and Expression of Mucin in the Lower Segment of Oviduct Between Indonesian Native Naked-Neck and Normal Feathered Chicken
Bambang Ariyadi, Jafendi Sidadolog, Sri Harnurti, Sri Sudaryati, Wihandoyo Wihandoyo, Heru Sasongko
Universitas Gadjah Mada
O-15-8 Effects of pine bark extract (flavangenol*) on heat shock protein expression in chicks
Hui Yang1, Vishwajit S Chowdhury1, Mohammad A Bahry1, Phuong V Tran1, Phong H Do1, Guofeng Han1, Rong Zhang1, Hideki Tashira1, Masahito Tsubata1, Mitsuhiro Furuse1
1 Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan.
2 Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan.
3 Division of Endocrinology, Department of Medicine, Boston Children's Hospital, Harvard Medical School, USA.
4 Research and Development Division, Toyo Shinyaku Co. Ltd., Japan.

O-15-9 COMPARATIVE STUDY OF NUTRITIONAL CONTENT AND PROTEIN PROFILE OF MALAYSIA EDIBLE BIRD NEST
STALEN JOEFRY1, AINI IDERIS1, INTAN SAFINAR ISMAIL2, FARIDAH ABAS2, JALILA ABU1,3, NORASFAIJA RAHMAD2, MOKRISH AJAT4, ROZAIHAN MANSOR3,4
1 Centre of Excellence on Swiftlets, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
2 Department of Veterinary Preclinical Sciences, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
3 Department of Veterinary Clinical Studies, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
4 Department of Medicine and Surgery of Farm and Exotic Animal, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
5 Laboratory of Natural Products, Institute of Bioscience, Universiti Putra Malaysia,
6 Agro-Biotechnology Institute Malaysia, National Institutes of Biotechnology Malaysia, c/o MARDI Headquarters, Malaysia.

O-15-10 The Effects of Red Onion Extract in the Pulmonary Histopathological Lesions of Layer Chickens At 47 Days Old
Riskha Nataria
Gadjah Mada University

Oral Session 16: Animal Reproduction (2)

O-16-1 The Effect of Sexed Semen Methods Toward Motility and Ratio of X and Y Sperm Filial Ongole Cattle
Enike Dwi Kusumawati1, Nurul Isnaini2, Aulia Puspita Anugra Yekti3, Nisaus Sholikah2, Muchamad Luthfi2, Lukman Affandhy1, Dicky Pamungkas1, Kuswati4, Aswha Richowi1, Herni Sudarwati2, Trinil Susilawati1
1 Animal Husbandry Faculty, Kanjuruhan University, Indonesia,
2 Animal Husbandry Faculty, Brawijaya University, Indonesia,
3 Student of Animal Husbandry Faculty, Brawijaya University, Indonesia,
4 Beef Cattle Research Station, Indonesia.

O-16-2 Effect of Post-Mortem Storage of Testicles on the Quality and Fertilizing Ability of Water Buffalo Epididymal Sperm
LERMA OCAMPO1,2, EDENEIL JEROME VALETE1, EVARISTO ABELLA2, MARLON OCAMPO1
1 Reproductive Biotechnology Unit, Philippine Carabao Center, National Headquarters and Gene Pool, 2 Department of Biological Sciences, College of Arts and Sciences, Central Luzon State University.

O-16-3 Calf Birth Weight and Post Partum Estrus Bali Cow Fed Complete Feed From Palm Oil Plantation in Central Borneo Indonesia
Mudhita Ida Ketut1, Baliarti Endang1, Priyono Sasmito Budhi Subur2, Umami Nafiati2, Noviandi Cuk Tri1, Kustono1, Suparta Budisatria I Gede1, Wattimena Jeffie1
1 Antakusuma University Faculty of Agriculture, 2 Gadjah Mada University Faculty of Animal Science, 3 Pattimura University Faculty of Agriculture.
0-16-4 Milk Production of Sows Superovulated with PMSG and hCG Through Superovulation Before Mating
Mien Theodora Rossesthellmda Lapian1, Pollung Siagian1, Wasmen Manalu1, Rudy Priyanto2, Petrus Montong1
1 Sam Ratulangi University, 2 Bogor Institute of Agriculture

0-16-5 Effect of Sericin Supplementation on Motility and Plasma Membrane Integrity of Frozen-Thawed Dairy Cattle Bull Semen
Yotsapon Yangngam1, Vibuntita Chankitisakul1, Monchai Punprom1, Saowaluk Suton1, Thevin Vongpralab2
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand, 2 Thermo-tolerance Dairy Cattle Research Group, Khon Kaen University, Thailand

0-16-6 Anti Bovine Pregnancy Associated Glycoprotein (anti-bPAG) 60kDa as Biomarker Candidate For Early Detection of Ruminant Pregnancy
Aulanniam Rifai1, Min Rahmatilla1, Sonnya Oktaviani Helina1, Dyah Kinashi Wuragil1, Agung Pramana Marhendra1
1 Brawijaya University, Faculty of Veterinary Medicine, 2 Brawijaya University, Faculty of Sciences

0-16-7 Effects of straws size on the quality of cryopreserved Thai native chicken semen
Pachara Thananurak1, Napapach Chuaychu-noo1, Pornjir Sornseeda2, Saennamphung Somtaw3, Thevin Vongpralub1
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand, 2 Faculty of Agricultural and Technology, Nakhon Phanom University, Thailand, 3 Research and Development Network Center for Animal Breeding (Native chicken), Faculty of Agriculture, Khon Kaen University, Thailand

0-16-8 Production and Reproductive Performance of Bali Cattle at Different Maintenance System
Woro Busono, Dwi Dedeh Kurniasari
Brawijaya University

0-16-9 Expression of prolactin and prolactin regulatory element binding protein in the anterior pituitary gland of chicken embryo and laying hens.
Norio Kansaku1, Yasuko Tobari1, Gen Hiyama1, Naokazu Minoguchi2, Masazumi Numata2, Masatoshi Kino3, David Zadworny4
1 Azabu University, 2 Aichi Agricultural Research Center, 3 McGill University

0-16-10 Spermatozoal transcriptome analysis in boars with varying fertility reveals differential expression of genes related to metabolism, fertilisation and zygote development
Narayana H Mohan, P.P Gokuldas, Lipika Buragohain, Madan Kumar Tamuli, Dilip Kumar Sarma
ICAR-National Research Centre on Pig, India

Oral Session 17: Feeds & Feeding (Ruminants) (1)
Tuesday, 23 August 17:00-19:00 Room N302
Chair: Toshiyoshi Ichinohe Shimane University

0-17-1 Effect of Concentrate Feed Containing Fermented Pumpkin and Cassava On Growth Performance of Beef Cattle
Khanchai Darmek1, Tosawat Anorach1, Somchart Thana2, Chayut Dongpaaleedham1, Norakamol Loorodphan1, Choke Sorachakur1
1 Program of Biotechnology, School of Agriculture and Natural Resources, University of Phayao, Thailand, 2 Program of Animal Science, School of Agriculture and Natural Resources, University of Phayao, Thailand, 3 Phayao Livestock Research Station, Department of livestock development, Thailand, 4 Faculty of Food and Agricultural Technology, Pibulsongkram Rajabhat University, Thailand
**O-17-2** The Survey of nutritive value of By-products from Oil palm that use for raise Beef Cattle  
Sitthisak Jantarat, Thaintip Kraiprom, Narumon Sanajit  
Prince of Songkla University

**O-17-3** Microorganisms Composition of Tropical TMR's Silage Inoculated with Local Lactic Acid Bacteria  
Ahmad Wahyudi¹, Listari Hendraningsih¹, Dicky Pamungkas², Roy Hendroko Setyobudi¹  
¹ Faculty of Agriculture and Animal Husbandry, Muhammadiyah Malang University, Indonesia,  
² Institute of Beef Cattle Research, Indonesia,  
³ Sinarmas Agroresources and Technology Tbk., Indonesia

**O-17-4** FORAGE GROWING AND HAY MAKING OF CLITORIA TERNATEA FOR DRY SEASON FEED SUPPLEMENT IN EAST NUSA TENGGARA, INDONESIA  
Jacob Nulik, Debora Kana Hau  
East Nusa Tenggara Assessment Institute for Agriculture Technology

**O-17-5** Effect of temperature and underground storage of stem sections on emergence and establishment of nursery plants of dwarf Napier grass  
Yasuyuki Ishii¹, Yusuke Iki², Satoru Fukagawa², Sachiko Idota³  
¹ Faculty of Agriculture, University of Miyazaki,  
² Graduate School of Agriculture, University of Miyazaki,  
³ Nagasaki Agricultural and Forestry Technical Development Center

**O-17-6** Fermentation characteristics of tropical grass using in vitro gas production technique  
Chaowarit Mapato, Metha Wanapat  
Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand

**O-17-7** Increasing Fattening Performance of Bali cattle by Improving Post Weaning Growth Through Supplementation with Sesbania grandiflora  
Dahlanuddin Dahlanuddin¹, Baiq Tutik Yuliana¹, Oscar Yanuarianto¹, Tanda Sahat Panjaitan², Michael Halliday¹, Harry Max Shelton¹  
¹ Faculty of Animal Science University of Mataram, Indonesia,  
² Assessment Institute for Agricultural Technology, Indonesia,  
³ School of Agriculture and Food Sciences, The University of Queensland, Australia

**O-17-8** Study of Digestibility Value of Oil Palm By Product Ration and Its Effect on The Performance of Bali Cattle  
Fariani Armina, Muslim Gatot, Wahyuni Dyah, Priyanto Langgeng, Abrar Arfan  
Department of Animal Science, Agriculture Faculty of Sriwijaya University, Indonesia

**O-17-9** Optimizing Rice Straw Utilization for Bali Cattle Fattening as Adaptation Strategy to Climate Change for Smallholder Farmers in Lombok Indonesia  
Yusuf Akhyar Sultryono¹, Muhammad Ali¹, Made Sriaish¹, Muhammad Taufik Fauzi²  
¹ Faculty of Animal Science University of Mataram, ² Faculty of Agriculture University of Mataram

**O-17-10** Different level of vitamin in Calf Milk Replacer effect on calf blood parameters and calf development  
Harumi Ono¹, Akira Saito², Tatsuhiro Matsuno², Takeshi Hayashi¹, Shuji Ueda¹, Takeshi Baba¹  
¹ Fukuoka Agriculture and Forestry Research Center,  
² Zen-Raï-Ren The National Federation Dairy Co-operative Association,  
³ Judicial Agricultural Union Kusunoki Dairy Farming production Association
Oral Session 18: Animal Nutrition (Non-Ruminants) (4)

Chair: Henny Akit, Universiti Putra Malaysia

O-18-1 The Effects of Using Corn with Various Phytic Acid in Diets on Performance, Phosphorus and Calcium Serum in Nursery Pigs
Pattaraporn Poommarin
Faculty of Animal Sciences and Agricultural Technology, Silpakorn University

O-18-2 Dietary fish oil regulates glucose and lipid metabolism genes via porcine peroxisome proliferator-activated receptor γ
Yu-Hsiang Yu
Department of Biotechnology and Animal Science, National Ilan University

O-18-3 Effect of feeding of noni fruit powder (Morinda citrifolia) based herbal supplement on production and meat quality in hybrid duck
David Kurniawan, Widodo Eko, Djunaidi Irfan H
Brawijaya University

O-18-4 Effects of Supplemental β-Mannanase to Provide Substrates for Binding to Aflatoxin in Feed on Growth and Health of Pigs
Sung Woo Kim, Kayla Leanne Brooks, Alexandra C. Weaver
North Carolina State University

O-18-5 Efficacy of Supplemental Bacteriophages on Growth and Gut Health of Pigs
Kayla Leanne Brooks, Sung Woo Kim
North Carolina State University

O-18-6 Identification of a possible probiotic Bacillus coagulans substrain that modulate the fecundity of the laying hen
Toshiyuki Ito1,2, Hiroyuki Miyamoto1,3,4, Wataru Suda1,3, Shinji Fukuda3,4, Ryo Watanabe3, Shota Yoshikawa1, Hisashi Miyamoto3, Hiroshi Ohno5, Masahiro Hattori5, Hiroaki Kodama3
1 Chiba University, 2 Keiyo plant engineering ltd., 3 Keio University, 4 Semas ltd., 5 Tokyo University, 6 RIKEN IMS, 7 Waseda University

O-18-7 THE EFFECTS OF GROUND RAW ALEURITES MOLUCCANA L. (Willd) KERNEL ON PERFORMANCE OF LAYING HENS
Rohaida Abdul Rasid1, Abd Razak Alimon2
1 Faculty of Sustainable Agriculture, University Malaysia Sabah, Malaysia, 2 Faculty of Animal Husbandry, Universitas Gadjahmada, Indonesia

O-18-8 HAEMATOLOGICAL AND PERFORMANCE PARAMETERS OF BROILER SUPPLEMENTED BY Tinospora crispa L. Miers EXTRACT
Syam Rahadi1, Astriana Napirah1, La Malesi La Malesi1, La Ode Arsyad Sani1, Dian Agustina1, Natsir Sandiah1, La Ode Baa1, Rahman Rahman1, Widhi Kurniawan1, Ayu Utami Bakhtiar2, Wa Ode Astriyani Sari3
1 Faculty of Animal Science, Universitas Halu Oleo, 2 Graduate of Faculty of Animal Science, Universitas Halu Oleo

Kamil Kucukyilmaz1, Mehmet Bozkurt1, Mustafa Çınar2, Erol Bintaş1, Mertcan Demircioğlu1
1 Department of Animal Science, Faculty of Agriculture, Eskişehir Osmangazi University, Eskişehir-Turkey, 2 General Directorate of Research, Erciyes Research Institute, Aksaray-Turkey

O-18-10 SULFADIAZINE RESIDUE IN THE LIVER, BREAST MEAT, AND PERFORMANCE OF BROILER SUPPLEMENTED BY TURMERIC (Curcuma domestica Valet) MEAL
Rahman Rahman1, La Ode Nafiu1, Syam Rahadi, Deki Zulkarnain, Astriana Napirah
Faculty of Animal Science, Universitas Halu Oleo, Kendari
Day 3: Thursday, 25 August [Kyushu Sangyo University]

Oral Session 19: Milk, Eggs and By-products

Thursday, 25 August 8:30-10:30 Room 5207

Chair: Peter Wynn, Charles Sturt University

0-19-1 Evaluation of Lactic Acid Bacteria from Ettawah Crossbred Goat Milk as Probiotic
Nurliyani Nurliyani, Indratiningsih, Widodo
Dept. of Animal Product Technology, Faculty of Animal Science, Universitas Gadjah Mada

0-19-2 Characteristic and Emulsion Stability of Low Fat Mayonnaise Using Rice Bran Oil and Kefir
Herly Evanuari, Nurliyani, Indratiningsih, Pudji Hastuti
1. Animal Food Technology, Faculty of Animal Husbandry, Brawijaya University, Indonesia
2. Animal Product Technology, Faculty of Animal Science, Gadjah Mada University, Indonesia

0-19-3 Amoxicillin, ampicillin and penicillin residues in informal milk supply chains of Pakistan
Peter Wynn, Naveed Aslam, Muhammad Tipu, Mateen Abbas, Muhammad Ishaaq, Sajid Latif,
David McGill, Hassan Warrich, Muhammad Husnain
1. Graham Centre for Agricultural Innovation, Charles Sturt University, Australia,
2. Quality Operation Laboratory, University of Veterinary and Animal Sciences, Pakistan,
3. Faculty of Veterinary and Agricultural Sciences, University of Melbourne, Australia

0-19-4 Evaluation of Chemical Characteristic and Viability Microbial Of Kefir with Kolang-Kaling Fruit Addition as a Prebiotic
Afriza Yelnetty, Rahmawati Hadju, Arie Mirah, Nova Lontaan, Christina Junus
Universitas Sam Ratulangi

0-19-5 Effect of various acids additions on the quality and digestibility of Ricotta cheese
Chung-Shiuan Wu, Mei-Jen Lin
National Pingtung University of Science and Technology

0-19-6 Effect of pretreatment of casein micelle on isolation of milk fat globule membrane from buttermilk by using microfiltration method
Tien-En Wei, YU-YI Chen, Yu-Hsuiin Tzeng, Tsai-Shin Wang, Yu-Chun Lin, Yen-Po Chen
Department of Animal Science, National Chung Hsing University

0-19-7 KEFIR QUALITIES OF GOAT MILK WHICH ADDED Lactobacillus plantarum AND BANANA PEEL FLOURS
INDRATININGSIH INDRA\TININGSIH
Faculty of Animal Science Universitas Gadjah Mada

0-19-8 Milk fermentation with peptide-requiring Lactobacillus gasseri using advance pepsinolysis
Kensuke Arakawa, Kanako Matsunaga, Ai Moritoki, Shuhei Takihiro, Soma Ryuto, Yasushi Kawai,
Tetsuya Masuda, Taku Miyamoto
1. Graduate School of Environmental and Life Science, Okayama University
2. Graduate School of Bioresource Sciences, Nihon University
3. Faculty of Food Culture, Kurashiki Sakuyo University

0-19-9 Isolation of nisin-producing Lactococcus lactis subsp. lactis strains from dadiah, Minangkabau fermented buffalo milk in West Sumatra, Indonesia
Ade Sukma, Kensuke Arakawa, Jafri nur, Hidetoshi Morita
1. Graduate School of Environmental and Life Science, Okayama University
2. Faculty of Animal Husbandry, Andalas University

0-19-10 Characteristics of Lactic acid bacteria isolated from Chigee collected in Inner Mongolia
Yoshikazu Adachi, Maki Nakata
National Ibaraki University
Oral Session 20: Feeds & Feeding (Non-Ruminants) (1)

Chair: Shubash Chandra Das  Bangladesh Agricultural University

O-20-1  Effect of Eggshell Levels in Layer Diet on Productive Performance, Egg Quality and Plasma Calcium Concentration
Ponnapan Saenphoom, Suphawadee Chimtong, Krittiya Lertchunhakiat, Manatsanan Nopparatmaitree
  Faculty of Animal Sciences and Agricultural Technology, Silpakorn University

O-20-2  Beneficial effect of AZOMITE® as a source of natural minerals on growth performance of broilers
Shubash Chandra Das
  Bangladesh Agricultural University

O-20-3  INCLUSION EFFECT OF MANGOSTEEN PEEL MEAL AS FEED ADDITIVE ON PERFORMANCES, CARCASS AND INTERNAL ORGANS OF MOJOSARI DUCK
Dini Hardini¹ ², Irfan Djunaidi¹, Edhy Soedjarwo¹
  ¹ Faculty of Animal Husbandry, Brawijaya University, Indonesia,
  ² The Assessment Institute for Agricultural Technology, Indonesia

O-20-4  Use of Blue Swimming Crab Waste as Alternative Animal Feedstuff
Sunate Surbkar¹, Rawin Surbkar², Chandita Bupata¹, Sujinda Khunakan¹, Supasan Sa-ngiamjit¹
  ¹ Faculty of Engineering and Agro-industry, Maejo University, Thailand,
  ² Faculty of Science and Technology, Rajamangala University of Technology Tawan-ok, Thailand

O-20-5  EFFECT OF MULTI-CARBOHYDRASE ENZYME SUPPLEMENTATION AND ROUTE OF ADMINISTRATION ON BROILER GROWTH PERFORMANCE AND ENERGY VALUE OF CORN-SOYBEAN MEAL DIETS
Rudyard Marlowe O. Cruz, Rommel C. Sulabo
  Animal Nutrition Division, Animal and Dairy Sciences Cluster, University of the Philippines Los Baños, Philippines

O-20-6  UTILIZATION OF "GOROHO" BANANA STEM (Musa acuminata, sp) MEAL AS AN ALTERNATIVE FEED ON BROILER PERFORMANCE
Marie Najoan, Betty Bagau, Florencia Sompie, Fenny Wolayan, Meity Imbar
  Faculty of Animal Husbandry University of Sam Ratulangi

O-20-7  THE EFFECTS OF INITIAL FEEDING AND DRINKING ON SMALL INTESTINE AND GROWTH PERFORMANCE OF NATIVE CHICKEN
Luluk Annayyir Aulia Kusumawardani, Meidina Inasa
  Universitas Gadjah Mada

O-20-8  Effects of Different Feed Processing Methods on Growth Performance in Broiler chickens
Jinsoo Kim, Abdolreza Hosseindoust, Suyhup Lee, Yohan Choi, Minju Kim, Alip Kumar, Seung min Oh, HyunBin Ham, III Kyong Kwon, Byung Jo Chae
  Kangwon National University

O-20-9  THE EFFECTS OF UTILIZATION OF DIFFERENT PROCESSING TECHNIQUES OF SKIPJACK BONE MEAL IN THE RATION ON EGG PRODUCTION OF QUAIL
Betty Bagau, Marie Najoan, Meity Imbar, Hengki Liwe, Florencia Sompie
  Faculty of Animal Husbandry University of Sam Ratulangi
Oral Session 21: Animal Breeding & Genetics

Thursday, 25 August 8:30-10:30 Room N202

Chair: Vo Anh Khoa Do
Can Tho University

O-21-1 Effects of porcine C8a-b polymorphisms on hemolytic complement activity
Vo Anh Khoa Do, Edwin Murani, Siriluck Ponsuksili, Ronald Brunner, Thi Dieu Thuy Nguyen, Klaus Wimmers
1 Can Tho University, 2 Institute for Genome Biology at the Leibniz Institute for Farm Animal Biology, 3 Vietnam Academy of Science and Technology

O-21-2 Genome Wide Association Study of Oleic Fatty Acid in Duroc Swine
Vanessa Viterbo, Bryan Irvine Lopez, Taehun Kim, Kang Seok Seo, Hyunsung Kang, Choulwon Song
1 Suncheon National University, 2 Central Luzon State University

O-21-3 A genetic association study for the lung lesion scores of mycoplasma pneumonia in pigs
Toshihiro Okamura, Hiroshi Kadowaki, Chihiro Shibata, Eisaku Suzuki, Ayumi Mikawa, Toshimi Matsumoto, Hirohide Uenishi, Osamu Sasaki, Keiichi Suzuki, Masahiro Satoh
1 Institute of Livestock and Grassland Science, NARO, 2 Graduate School of Agricultural Science, Tohoku University, 3 Miyagi Livestock Experimental Station, 4 JATAF-Institute, Japan Association for Techno-Innovation of Agriculture, Forestry and Fisheries, 5 Institute of Crop Science, NARO, 6 Institute of Agrobiological Sciences, NARO

O-21-4 GENETIC DIVERSITY AND GENETIC STRUCTURE OF FORMOSAN PANGOLIN (MANIS PENTADACTYLA PENTADACTYLA) IN TAIWAN BASED ON MHC AND MICROSATELLITE MARKERS
Jin-Ting Liu, Fang-Yu Lai, En-Chung Lin, Yu-Hsuan Wu, Hsien-Shao Tsao, Shih-Chien Chin, Pei-Hwa Wang
1 Department of Animal Science and Technology, National Taiwan University, 2 Taipei Zoo

O-21-5 Estimation of Growth Curve Parameter in Japanese Quail
Arraya Jeanmas
Faculty of Science and Technology, Prince of Songkla University, Pattani campus, Thailand

O-21-6 CROWING CHARACTER OF GAGA' CHICKEN AS LONG CROWER OF NATIVE CHICKEN BREED OF INDONESIA
SRI RACHMA APRILITA BUGIWATI, MJUHAMMAD IHSAN ANDI DAGONG, FACHRI ASHARI
HASANUDDIN UNIVERSITY - INDONESIA

O-21-7 THE GENETIC DIVERSITY OF Mx|Hpy81 GENES IN NATIVE CHICKENS USING PCR-RFLP TECHNIQUE
Muhammad Amrullah Pagala, Salihi Takdir
Halu Oleo University

O-21-8 Fate determination of skeletal muscle-derived mesenchymal stem cells into myogenic and adipogenic lineage
Wenjuan Sun, Ting He, Chunfu Qin, Kai Qiu, Xin Zhang, Yanhong Luo, Defa Li, Jingdong Yin
State Key Lab of Animal Nutrition, College of Animal Science and Biotechnology, China Agricultural University

O-21-9 Assessment of genetic diversity in Agu pig population by estimates of coancestry coefficient based on genome-wide approach
Arakawa Aisaku, Shihei Touma, Masaaki Taniguchi, Tomoko Eguchi-Ogawa, Hirohide Uenishi, Satoshi Mikawa
1 Institute of Livestock and Grassland Science, NARO, 2 Okinawa Prefectural Livestock and Grassland Research Center, 3 Institute of Agrobiological Sciences, NARO
O-21-10 Genetic diversity and relationship for Vietnamese native pigs using genome wide SNP markers
Shinya Ishihara1, Aisaku Arakawa2, Masaaki Taniguchi2, Minh Luu Quang3, Lan Pham Doan3, Ba Nguyen Van1, Satoshi Mikawa3, Thu Nhu Van1, Kazuhiro Kikuchi1
1Institute of Agrobiological Sciences, NARO, Japan,
2Institute of Livestock and Grassland Science, NARO, Japan,
3National Institute of Animal Science, Vietnam

Oral Session 22: Poultry Science & Industry (1)
Thursday, 25 August 8:30-10:30 Room N203

Chair: TBD

O-22-1 DIETARY SUBSTITUTION OF SOYBEAN MEAL WITH SOY-MILK WASTE: EFFECTS ON GROWTH PERFORMANCE AND PHYSICAL MEAT QUALITY IN BROILER CHICKENS
Nanung Danar Dono, Supadmo Supadmo, Edwin Indarto, Soeparno Soeparno
Universitas Gadjah Mada, Faculty of Animal Science

O-22-2 Genetic features of red and green junglefowls and relationship with Indonesian native chickens Sumatera and Kedu Hitam
Ryouka Kawahara-Miki1, Maria Ulfah1, Achmad Farajallah1, Muladno Muladno1, Ben Dorshorst4, Alison Martin1, Tomohiro Kono6
1NODAI Genome Research Center, Tokyo University of Agriculture,
2Department of Animal Production and Technology, Faculty of Animal Science, Bogor Agricultural University (IPB),
3Department of Biology, Faculty of Mathematics and Natural Science, Bogor Agricultural University (IPB),
4Department of Animal and Poultry Sciences, Virginia Tech,
5The Livestock Conservancy,
6Department of Bioscience, Tokyo University of Agriculture

O-22-3 The Influence of Feed And Water Added Into Broiler Excreta on The Growth Of House Fly Larvae (Musca Domestica L)
Wihandoyo Wihandoyo, Ahmad Ferdian, Rahmad Saleh Hasibuan
Faculty of Animal Science GMU

O-22-4 The Effect of Lighting Regimens on Broiler Growth:1. On the Productive Performance
Sri Sudaryati, Muhammad Mauludin, Sri Harimurti, Bambang Ariyadi, Wihandoyo Wihandoyo, Heru Sasongko
Universitas Gadjah Mada

O-22-5 The Effect of Lighting Regimens on Broiler Growth:2. On Weekly T3 and T4 Concentration
Muhammad Mauludin, Sri Harimurti, Sri Sudaryati, Bambang Ariyadi, Wihandoyo Wihandoyo, Heru Sasongko
Universitas Gadjah Mada

O-22-6 EFFECT OF PHYTASE, CELLULASE AND RICE HULL SUPPLEMENTATION IN COMMERCIAL BROILER DIETS ON PERFORMANCE, INTESTINAL PH, AND CAECAL VFA
Sri Hartini, Purwaningsih Purwaningsih
Papua University Department of Animal Husbandry

O-22-7 IMPACT OF PRE-COLD ROOM STORAGE ON HATCHARY PERFORMANCES
Jagath Munasinghe1, Shan Karnanayaka1, Tilini Disanayaka1, Gayani Herath1, Priyantha Kumara2
1Sabaragamuwa University of Sri Lanka, Department of Livestock Production,
2New Anthoney's Farms (Pvt) Ltd.
O-22-8 THE EFFECT OF SUPPLEMENTATION OF LIGNOCHLORITIC BACTERIA ISOLATES TO BROILER CHICKENS' PRODUCTIVITY, MEAT QUALITY, AND HEALTH
Lili Zafizar
Faculty of Agriculture and Animal Husbandry, University of Muhamadiyah Malang

O-22-9 BROILER FARMING IN TAIWAN: ON-FARM SURVEY IN HUALIEN COUNTY
Chia-Jung Hsieh
Hualien Animal Propagation Station, Livestock Research Institute, Council of Agriculture, Executive Yuan, Taiwan

O-22-10 The application of the mixture consisting of sesame meal and chicken blood by fermentation to broiler feed
Yu-Hsuan Ting, Yi-Cheng Lee, Chian-Kai Chang, Hen-Wei Wei
1Department of animal science and technology, National Taiwan University, 2Li Han Enterprise Corporation Limited

Oral Session 23: Animal Physiology & Anatomy
Thursday, 25 August 8:30-10:30 Room N204
Chair: TBD

O-23-1 Oral administration of the medium containing live D-aspartate producing bacteria enriched with D-aspartate declines rectal temperature in chicks
Phong H Do, Phuong V Tran, Mohammad A Bahry, Hui Yang, Guofeng Han, Asami Tsuchiya, Yukio Asami, Mitsuhito Furuse, Vishwajit S Chowdhury
1Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan,
2Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan
3B&D Division, Meiji Co., Ltd., Japan

O-23-2 Influence of brain amino acids in the regulation of food intake in neonatal chick
Phuong V Tran, Vishwajit S Chowdhury, Mao Nagasawa, Phong H Do, Mohammad A Bahry, Hui Yang, Mitsuhito Furuse
1Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan,
2Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan

O-23-3 The unfolded protein response pathway IRE1-XBP1 is required for myoblast differentiation
Yukako Tokutake, Keita Yamaa, Satoshi Hayashi, Shinichi Yonekura
1Interdisciplinary Graduate School of Science and Technology, Shinnshu University,
Graduate school of Agriculture, Shinnshu University, 3Institute for Biomedical Sciences, Shinnshu University

O-23-4 Regulation of the cathelicidins expression in the vagina of laying hens in response to stimulation with microbial-associated molecular patterns
Ahmad Abdel-Mageed, Naoki Isobe, Yukinori Yoshimura
1Faculty of Science Minia University Egypt, 2Graduate School of Biosphere Science Hiroshima University Japan,
3Research Center for Animal Science Hiroshima University Japan

O-23-5 A Comparison of Growth Performance, Carcass Quality of Male and Female Meat Type Ducks
Suteera Kunjoo, Chaiyapoom Bunchasuk, Theerawit Poeikhampha, Choawit Rakangthong
Kasetsart University

O-23-6 Analysis of growth curves of male and female Pekin ducks
Choawit Rakangthong, Theerawit Poeikhampha, Suteera Kunjoo, Wiriy Loongyal, Kanokpong Pourngong, Phongthorn Kongmun, Chaiyapoom Bunchasuk
Department of Animal Science, Faculty of Agriculture, Kasetsart University, Thailand

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O-23-7 Expression profile of mood-related genes in the prefrontal cortex of Rev-erb α deficient mice
Tsuyoshi Otsuka, Akira Kohsaka, Hue Le Thi, Tomomi Nakao, Masanobu Maeda
Wakayama Medical University School of Medicine

O-23-8 Action of insulin-like factor 3 (INSL3) as a germ cell survival factor in boars
Tetsuya Kohsaka, Itaru Minagawa, Dai Sagata, Ali Mohammed Pitia, Kei Terada, Masatoshi Shibata, Yoshio Hasegawa, Hirosri Sasada
1 Laboratory of Animal Reproduction and Physiology, Faculty of Agriculture, Shizuoka University, Japan,
2 Division of Animal Resource Production, The United Graduate School of Agricultural Science, Gifu University, Japan,
3 Shizuoka Swine and Poultry Experimental Station, Japan,
4 Laboratory of Animal Reproduction, School of Veterinary Medicine, Kitasato University, Japan

O-23-9 Muscle fiber type visualization using four anti-myosin heavy chain antibodies
Shoko Sawano, Yusuke Komiya, Riho Ichitsubo, Mako Nakamura, Ryuchi Tatsumi, Yoshihide Ikeuchi, Wataru Mizunoya
1 Fukuoka Women's Junior College, 2 Kyushu University

O-23-10 Impact of oral L-citrulline administration on thermoregulation and heat-tolerance in chicks
Vishwajit S Chowdhury, Phuong V Tran, Mohammad A Bahry, Phong H Do, Hui Yang, Guofeng Han, Mitsuhiro Furuse
1 Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan,
2 Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan

Oral Session 24: Feeds & Feeding (Ruminants) (2)
Thursday, 25 August 8:30-10:30 Room N301
Chair: Metha Wanapat Khon Kaen

O-24-1 PRODUCTIVITY AND NUTRIENTS QUALITY OF TWO VARIETIES Brachiaria sp ON DIFFERENT LEVEL OF FERTILIZER IN YOGYAKARTA INDONESIA
Nafiatul Umami, Bambang Suhartanto, Meita Puspa Dewi
Faculty of Animal Science Universitas Gadjah Mada

O-24-2 EFFECTS OF FEEDING DAIRY COW WITH INOCULATED CORN SILAGE ON MILK QUALITY
Li-Chen Kao, Jin-Seng Lin, Hung-Hsi Hu, San-Land Young, Shi-Yong Li
1 SynbioTech Inc, Taiwan, 2 Department of Food Science, National Penghu University, Taiwan

O-24-3 Performance of tropical dairy cows fed on cassava top silage in rice straw based diet
Metha Wanapat, Kampanat Phesatcha, Bounnaxay Viennasay, Sungchhang Kang
1 Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Agricultural Unit, Department of Education, National Institute of Education, Cambodia

O-24-4 Fatty Acid Composition in M. longissimus dorsi muscle of Thai Swamp Buffalo Feeding by Soybean Oil Supplement within Concentration Rations
Pattraphorn Pattchararasarat, Suivit Boonprong
1 King Mongkut's Institute of Technology Ladkrabang, 2 Ministry of Agriculture and Cooperative

O-24-5 Potential of Mixed Feed Palm Kernel Meal and Oil Palm Decanter Cake was Fermented by Rhizopus oligosporus for Bali Cattle
ROFIO MUHAMAD NASIR, Wina Elizabeth, Angga I Wayan, Gopar Ruslan Abdul
1 Centre for the Agricultural Production Technology, BPPT, Indonesia,
0-24-6 Evaluation of Seasonal Changes in Nutritional Properties of Kudzu Silage
Hoang Lam Dang, Obitsu Taketo, Toshihisa Sugino, Lv Renlong
Graduate School of Biosphere Science, Hiroshima University

0-24-7 Supplementation of Sesbania grandiflora to pregnant and lactating cows increased birth weight, milk production and preweaning growth of Bali cattle
Imran Imran1, S P S Budhi2, Nono Ngadiono2, D Dahlanuddin1
1 Faculty of Animal Science University of Mataram, Indonesia,
2 Faculty of Animal Science University of Gadjah Mada, Indonesia

0-24-8 Ensiling fruits byproduct for feed use aiming at long term preservation and methane mitigation in the rumen
Yutaka Uyeno1, Makoto Mitsumori2, Pradeep Malik3, Atul Kolte3, Raghavendra Bhatta3
1 Shinshu University, 2 NARO Institute of Livestock and Grassland Science,
3 National Institute of Animal Nutrition and Physiology (India)

0-24-9 Supplementation of suckling Bali calves with maize grain or sesbania increases growth rates prior to weaning
T S Panjaitan1, S Gunadi2, D Dahlanuddin2, D P Popp3, S P Quigley3
1 Assessment Institute for Agricultural Technology, Jalan Raya Peninjauan Narmada, NTB, Indonesia,
2 Faculty of Animal Science, University of Mataram, Indonesia,
3 School of Agriculture and Food Sciences, The University of Queensland, Australia

0-24-10 Feeding Traits and Production Systems of Lulu Cattle in Manang and Mustang District of Nepal
Manoj Kumar SHAH1, Keshab Prasad Dhungana1, Hiroki Anzai1, Yoshiaki Hayashi1, Hajime Kumagai2
1 Nepal Agricultural Research Council, Regional Agricultural Research Station, Kaski Nepal,
2 Faculty of Agriculture, Meijo University, Japan, 3 Graduate School of Agriculture, Kyoto University, Japan

Oral Session 25: Animal Nutrition (Ruminants) (2)
Thursday, 25 August 8:30-10:30 Room N302

Chair: TBD

0-25-1 Effect of Saccharomyces cerevisiae Fermented Cassava Bioethanol Waste on Feed Intake, Digestibility, Rumen Fermentation and Microorganism Diversity in Dairy Calf
Anusorn Cherdthong1, Chanadol Supapong2, Anuthida Saenkamsorn1, Metha Wanapat1, Chalong Wachirapakorn1, Nirawan Anantasook2, Pongsaton Gunun3
1 Khon Kaen University, 2 Udon Thani Rajabhat University,
3 Rajamangala University of Technology-Isan, Sakon Nakhon Campus

0-25-2 The effects of feeding methods during pre-weaning period on the fattening performance of male calves
Ercan Mevliyaogullari, Serap Goncu, Murat Gorgulu
Animal Science, Agricultural Faculty, Cukurova University

0-25-3 The utilization of yeast fermented cassava ethanol waste (YFCEW) from bio-ethanol plant in dairy cattle ration
Chalong Wachirapakorn, Chantira Wongnen, Naphongphat Suphrap, Warangkana Daenseekaew, Boonsem Pornjantuek
Department of Animal Science, Faculty of Agriculture, Khon Kaen University
0-25-4 Effects of exogenous fibrolytic enzyme (EFE) supplementation on rumen fermentation and fibrolytic bacteria population in ruminants fed rice straw-based diet
Chantira Wongnen, Chalong Wachirapakorn, Naphongphot Suphrap, Warangkana Daenseekaew, Boonserm Pornjantruek
Department of Animal Science, Faculty of Agriculture, Khon Kaen University

0-25-5 Effects of Dried Cassava Pulp from Bio-Ethanol Industry Supplementation on Rumen Fermentation, Rumen Cellulolytic and Xylanolytic Bacteria in Dairy Cows
Naphongphot Suphrap, Chalong Wachirapakorn, Chantira Wongnen, Warangkana Daenseekaew, Boonserm Pornjantruek
Department of Animal Science, Faculty of Agriculture, Khon Kaen University

0-25-6 Effect of Cassava Ethanol Byproducts Fermented with Yeast on Rumen Fermentation and Feed digestion
Virote Pattarajinda, Supakit Sunato, Pornchai Lowilai, Ngarmath Nontaso
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University
2 Department of Microbiology, Faculty of Science, Khon Kaen University

0-25-7 Adopting local best practice in reformulating dairy cow silage-based ration to improve cow’s performances
Despal Despal, Aditya Darmawan, Istychoirah Mahdiyah, Tutik Sriana, Luki Abdullah, Idat Galih Permana
Dept. Animal Nutrition & Feed Technology, Faculty of Animal Science, Bogor Agricultural University

0-25-8 Potential of Probiotics and Oligosaccharides in Inhibiting The Caussative Agents of Diarrhea in Dairy Calves
Listiarie Hendraningsih
University of Muhamadiyah Malang

0-25-9 Effect of Yeast Fermented and Physical forms of Corn Husk on Digestibility and Fermentation by Using In vitro Gas Techniques
Suban Foiklang, Meha Wanapat, Yanin Opatpatanakit, Anon Paserakung
1 Faculty of Animal Science and Technology, Maejo University, Thailand
2 Tropical Feed Resources Research and Development Center (TFOFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand

0-25-10 Structural Features of Condensed Tannins Affect In Vitro Rumen C18:3n-3 Biohydrogenation in Dairy Cows
Nguyen Thi Huyen, Christos Fryganas, Irene Mueller-Harvey, Saskia Van Laar-van Schuppen, Martin W. A. Verstegen, Wouter H. Hendriks, Wilbert F. Pellikaan
1 Animal Nutrition Group, Wageningen University, The Netherlands
2 Chemistry & Biochemistry Laboratory, Reading University, United Kingdom
3 Department of Farm Animal Health, Utrecht University, The Netherlands
4 Faculty of Animal Science, Vietnam National University of Agriculture, Vietnam
Oral Session 26: Animal Nutrition (Non-Ruminants) (5)

Thursday, 25 August 8:30-10:30 Room N303

Chairs: Kinh Van La
        Institute of Animal Sciences for Southern Vietnam
Sawitree Wongtangtinthan
        Faculty of Agriculture Khon Kaen University

O-26-1 Dietary lecithin improved feed efficiency in female and immunocastrated male finisher pigs
Henny Akit1,2, Hyatt Frobose1, Fahri Fahri1, Darryl D'Souza3, Brian Leury1, Frank Dunshea1
1Faculty of Veterinary and Agricultural Sciences, University of Melbourne, Australia,
2Department of Animal Science, Universiti Putra Malaysia, Malaysia,
3Animal Sciences and Industry, Kansas State University, USA

O-26-2 Effect of brown rice particle size on energy and crude protein digestibility in growing-finishing pigs
Akemi Yamamoto, Kaede Ono, Masaki Takasu, Erika Machino
Gifu University

O-26-3 A novel probiotic thermophile reduce the fat accumulation of the pigs, dogs, and mice via the alteration of gut microbiota.
Hirokuni Miyamoto1, Wataru Suda4, Shinji Fukuda2, Hisashi Masuoka3, Kenichi Kawada1
1Chiba University, 2Keio University, 3Semas Ltd., 4Tokyo University, 5RIKEN IMS, 6Sanak Ltd., 7Chubu shiryo Ltd.,
8Showa sangyo ltd., 9Keio plant engineering ltd., 10Waseda University

O-26-4 Effects of Grape Seed Proanthocyanidins on Intestinal Mucosal Immunity and Microbial community on Weaning Piglets
Meng Han
State Key Laboratory of Animal Nutrition, China Agricultural University

O-26-5 Different fatty acid compositions in regional adipose tissues in growing-finishing pigs
Sitan Chen, Bing Dong
China Agricultural University

O-26-6 EVALUATION OF FULLY OXIDIZED BETA-CAROTENE (OXBC) AS AN ALTERNATIVE TO ANTIBIOTICS FOR GROWTH PROMOTION AND DISEASE PREVENTION IN SWINE
Kinh Van La1, James G. Nickerson2, William W. Riley3, Phu Van Nguyen1
1Institute of Animal Sciences for Southern Vietnam, 2Aviagen Inc., Canada, 3Jinan University, China

O-26-7 Energy Harvesting Capacity differences of Gut microbiota in Landrace and Rongchang Sows throughout Gestation and Lactation Periods
Hongbin Liu, Chengli Hou, Shuai Wang, Qianhong Ye, Xiaoyu Zhang, Xiangfang Zeng, Shiyan Qiao
Ministry of Agriculture Feed Industry Centre, China Agricultural University

O-26-8 Nutrient Utilization Characteristics of Pigs with Various Growth Performance and the Phenotype Transformation to Recipient Mice by Fecal Transplantation
Tiantian Li, Beibei He, Na Li, Meng Shi, Taolin Yuan, Qiao Yan, Yuhua Zhu, Junjun Wang
State Key Laboratory of Animal Nutrition, China Agricultural University
0-26-9  Effect of Human Isolated LAB Species as Probiotic Supplement for Piglet on Gut Microbiota and Intestinal Morphology
Han Seo Ko, Jang Hyeon Soo, Hee Na Kim, Yu Hyun Kang, Joo Hong Min, Sang Jip Ohh
Kangwon National University

0-26-10 Phytate-hydrolyzing Bacillus sp. Isolated from Pig Gastrointestinal Tract
Reinhard Piniontoan, Steven Ryan Susanto Tan, Lucy Jap, Henchristy Febrinanda Te, Ariella Samantha, Agustina Ika Susanti, Tje Jan Tan
Universitas Pelita Harapan, Biology Department

Oral Session 27: Dairy Science & Industry
Thursday, 25 August 11:00-13:00 Room S207
Chair: Sornthep Tumwasorn  Kasetsart University

0-27-1 Dose-comparison study of Lactococcus lactis producing heme oxygenase-1 for treatment of dextran sulfate sodium-induced acute colitis in mice
Suguru Shigemori1,2, Tasuku Ogita3, Takeshi Shimosato1,3
1Interdisciplinary Graduate School of Science and Technology, Shinshu University,
2Research Fellow of the Japan Society for the Promotion of Science (JSPS),
3Institute for Biomedical Sciences, Shinshu University

0-27-2 An immunostimulatory oligodeoxynucleotide from lactic acid bacteria promotes anaphylaxis to ovalbumin in mice
Yoshinari Yamamoto1,2, Takuma Okajima1, Tatsuko Ogita3, Takeshi Shimosato1
1Interdisciplinary Graduate School of Science and Technology, Shinshu University,
2Research Fellow of the Japan Society for the Promotion of Science (JSPS),
3Graduate School of Agriculture, Shinshu University

0-27-3 Measuring the Shape and Magnitude of Lactation Curves with Geometric Morphometric
Angel-Amed Duron Benitez1, Wen-Chi Huan2
1National Pingtung University of Science and Technology, Department of Tropical Agriculture and International Cooperation,
2National Pingtung University of Science and Technology, Department of Agribusiness Management

0-27-4 Sustainability Tools for Small Dairy Farmers in Thailand
Sornthep Tumwasorn, Monrudee Chomsuay, Kanokorn Nonsiri
Kasetsart University, Department of Animal Science

0-27-5 Immobilization of Kefir Microorganisms on Fruit Pieces for Fermented Milk Production
Ker-Sin Ng1, Sheng-Yao Wang2, Ming-Ju Chen1
1Department of Animal Science and Technology, National Taiwan University,
2Experimental Farm, National Taiwan University

0-27-6 Analysis of Lactic Acid Bacteria in Airag and Tarag, Traditional Fermented Milk Products in Mongolia
Chien-Jang Huang1, Ming-Ju Chen1, Koichi Watanabe1, Shirchin Demberel1
1Department of Animal Science and Technology, National Taiwan University,
2Mongolian Academy of Science, Mongolia

0-27-7 Development of a Novel Dairy Product Using Komagatibacter nataicolae and yeasts
Ping-Chu Liao1, Sheng-Yao Wang2
1Department of Animal Science and Technology, National Taiwan University
O-27-8 Performance and profit of feeding expired milk powder for pre weaning kids of Etawah Crossed Bred in a farmer group
Bastian Titus Ari Prayogo, Ahmad Mubarak Hasan Asrori, Yuni Suranindyah
Universitas Gadjah Mada, Faculty of Animal Science

O-27-9 Farming scale impact on ration and dairy cow's performances under traditional farm management in major producing province of Indonesia
Idat Galih Permana, Rika Zahera, Toto Toharmat, Despal Despal
Department of Animal Nutrition and Feed Technology, Faculty of Animal Science, Bogor Agricultural University

O-27-10 The Antimicrobial Activity of Bovine Colostrum Holstein Cows (FH) Towards Gram Positive and Negative Bacteria
Khusnul Khotimah
Muhammadiyah University in Malang

Oral Session 28: Feeds & Feeding (Non-Ruminants) (2) / Pig Science and Industry
Thursday, 25 August 11:00-13:00 Room N201

Chair: Rommel C. Sulabo University of the Philippines Los Banos

O-28-1 Functional properties of bean husks on hindgut fermentation and microbiota in rats
Myint Htun, Hiyrouki Kishi, Yu Iwahashi, Satoshi Koike, Yasuo Kobayashi
Graduate School of Agriculture, Hokkaido University, Japan

O-28-2 Dietary Fat Preference And Dependence In Weaning Piglet And Their Performance
Ruey-Chee Weng
National Pingtung University of Science and Technology

O-28-4 Effects of Feeding Methods in Summer Season on Reproductive Performance of Lactating Sows
Yohan Choi¹, Abdolreza Hoseindoust¹, Suhyup Lee¹, MinJu Kim¹, YoungHwa Kim², Seung Min Oh¹,
HyungBin Ham¹, Alip Kumar², Byung Jo Chae¹
¹ Kangwon National University,
² Department of Animal Resources Development, Swine Science Division, National Institute of Animal Science, RDA, Korea

O-28-5 Heterologous Expression and Characterization of Two Alpha-galactosidases Originated from Aspergillus oryzae
Yangzhi YANG, Xu YANG, Xiaojing GUO, Shuaijuan HAN, Bing DONG, Yunhe CAO
College of Animal Science and Technology, China Agricultural University (CAU), China

O-28-6 Efficacy of mycosorbents to ameliorate the adverse effects of naturally mycotoxin contaminated corn in Cherry Valley ducks
Pawadee Pakdee¹, Kantaphat Rattanasinthuphong¹, Bundit Tengjaroenkul²
¹ Department of Animal science, Faculty of Agriculture, Khon Kaen University, Thailand,
² Faculty of Veterinary Medicine, Khon Kaen University, Thailand

O-28-7 FEEDING VALUE OF DRIED FERMENTATION BIOMASS IN BROILERS
Rommel C. Sulabo, Noel B. Lumbo
Animal Nutrition Division, Animal and Dairy Sciences Cluster, University of the Philippines Los Banos, Philippines
O-28-8  EFFECT OF SURGICAL AND IMMUNOLOGICAL CASTRATION ON COLLAGEN SOLUBILITY AND SHEAR FORCE VALUE IN PORK
Panneepa Svapirunthep, Chanporns Chaosap
King Mongkut’s Institute of Technology, Faculty of Industrial Education

O-28-9  A New Development System for Automated Measurement and Recording pig weight
Cheng-Jung Yang1, Ming-Huang Chen2, Sheng-Chi Lin3, Yu-Ting Wu4, Yi-Chun Liao5, Shao-Yu Peng6
1 Department of Mechanical Engineering, National Pingtung University of Science and Technology, Taiwan,
2 Medical Device Innovation Center, National Cheng Kung University, Taiwan,
3 Center for Teaching Excellence, National Pingtung University of Science and Technology, Taiwan,
4 Department of Forestry, National Pingtung University of science and technology, Taiwan,
5 Department of Veterinary Medicine, National Pingtung University of science and technology, Taiwan,
6 Department of Animal Science, National Pingtung University of science and technology, Taiwan

O-28-10  Purification of soybean Kunitz trypsin inhibitor by Two-Dimensional Liquid Chromatography with Ultraviolet detection
Tianjiao Zhou, Pingli He
State Key Laboratory of Animal Nutrition, College of Animal Science and Technology, China Agricultural University

Oral Session 29: Animal Genetics & Diversity / Animal Reproduction
Thursday, 25 August 11:00-13:00 Room N202

Chair: Kazuhiro Kikuchi  Institute of Agrobiological Sciences, NARO

O-29-1  POLYMORPHISMS OF CALPASTATIN GENE (CAST) AND IT'S ASSOCIATION WITH GROWTH TRAITS IN INDONESIAN THIN TAIL SHEEP (TTS)
Muhammad Ihsan Anini Dagong1, Cece Sumantri2, Ronny Rahman Noor3, Rachmat Herman3, Mohamad Yamin4
1 Hasanuddin University, 2 Bogor Agricultural University

O-29-2  Genetic Diversity of Ongole Crossbred Cattle in Kebumen based on MC4R Gene
Fathon Akhmad1, Sumadi1, Tety Hartatik1, Mukhamad Khusnudin1, Dyah Maharani1, Nono Ngadiyono1, Diah Tri Widayati1, Cuc Tri Noviandi1
1 Faculty of Animal Science, Gadjah Mada University, 2 Association of Ongole crossbred cattle breeder in Kebumen

O-29-3  Genetic Diversity and Association between Reproductive Traits and Four Microsatellites in Thai Locally Adapted Cattle
Kalaya Boonyanuwat1, Phirot Sirisom2, Amnny Phuttharatanang3
1 Biodiversity Research Sector, Bureau of Animal Husbandry and Genetic Improvement, Department of Livestock Development, Thailand,
2 Tak Livestock Research and Breeding Center, Bureau of Animal Husbandry and Genetic Improvement, Department of Livestock Development, Thailand
3 Nongkwang Livestock Research and Breeding Center, Bureau of Animal Husbandry and Genetic Improvement, Department of Livestock Development

O-29-4  ESTIMATION AND PREDICTION OF BREEDING VALUES FOR RIBEYE AREA IN BEEF CATTLE FROM LIVESTOCK COOPERATIVE FARMS
Kunya Tuntivisottikul1, Kanya Jirajaroenrat2
1 Department of Agricultural Education, Faculty of Industrial Education, King Mongkut’s Institute of Technology Ladkrabang, Thailand,
2 Department of Animal Production Technology and Fisheries, Faculty of Agricultural Technology, King Mongkut’s Institute of Technology Ladkrabang, Thailand

O-29-5  EFFECT OF HEAT STRESS ON PHYSIOLOGICAL INDICES AND HEAT SHOCK PROTEIN 70 EXPRESSION IN INDIGENOUS BREEDS OF GOAT IN NIGERIA
Mabel O Akinyemi, Paul Oladele, Osamede H Osalywuu
Department of Animal Science, University of Ibadan, Nigeria
0-29-6  Whole Transcriptome Analysis of Thoroughbred and Jeju Native Horse by Exercise using RNA-sequencing
Byung Wook Cho, Teak-Soon Shin, Seong-Keun Cho, Byeong-Woo Kim, Jakyeom Seo, Jae-Young Choi, Jeong-Woong Park
Pusan National University

0-29-7  APPLICATION OF MICROSATELLITE MARKERS FOR BALI CATTLE GENETIC DIVERSITY EVALUATION IN BALI AND NUSA PENIDA ISLANDS CONSERVATION CENTER
Jakaria Jakaria, Alwiyah Alwiyah, Delisterika Mustika, Baihaqi Muhammad, Noor Ronny Rachman
Department of Animal Production and Technology, Faculty of Animal Science, Bogor Agricultural University

0-29-8  The variation of body linear of Indonesia Etawah goat at Lumajang districts, East Java and its correlation to milk production
Aris Winaya, Indah Prihartini, Abdulloh
Faculty of Agriculture and Animal Husbandry, University of Muhammadiyah Malang

0-29-9  ENDOMETRITIC IDENTIFICATION ON THROUGHBREED CROSSBREED HORSE WITH VAGINAL ACIDITY METHOD
Pradita Iustitia Sitaesmi, Kustono, Diah Tri Widayati
Universitas Gadjah Mada

0-29-10 EFFECT OF PRESYNCH-OVSYNCH/SUPEROVULATION USING A SPLIT-SINGLE INTRAMUSCULARLY OF FOLLICLE-STIMULATING HORMONE IN RUSA DEER
Vibuntita Chankitisakul1, Amphika Thongphakdee2, Chavin Chaisongkram2, Kanda Ponsrila4, Aunchisa Phojun4, Yoswaris Semaming4, Wuttigrai Boonkum1, Mongkol Techakumphu4
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Thermo-tolerance Dairy Cattle Research Group, Khon Kaen University, Thailand,
3 Wildlife Reproductive Innovation Center, Bureau of Conservation and Research, Zoological Park Organization, Thailand,
4 Department of Research, Conservation and Animal Health, Khon Kaen Zoo, Thailand,
5 Veterinary Technology Program, Faculty of Technology, Udon Thani Rajabhat University, Thailand

Oral Session 30: Meat & By-products (1)
Thursday, 25 August 11:00-13:00 Room N203

Chair: Chih-Ming Chen National Pingtung University of Science and Technology

0-30-1  The Microbial Analyses of Fermented Sausage from Tetelan Beef using Probiotic Culture Starter
Aulia Irhamni Fajri1, Irma Isnafia Arief2, Henny Nuraini2
1 National Pingtung University of Science and Technology, Taiwan, 2 Bogor Agricultural University, Indonesia

0-30-2  MICROBIOLOGY QUALITY OF BEEF DENDENG TREATED BY CURING WITH OR WITHOUT SODIUM NITRITE SOLUTION AT DIFFERENT STORAGE AND AFTER FRYING
Suryati Tutti, Isnafia Arief Irma, Wulandari Zakiah, Murtini Devi, Febriantini Dwi, Nurul Astri Yuanita
Bogor Agricultural University

0-30-3  Improvement of intestinal health by probiotic fermented beef product
IRMA ARIEF ISNAFIA, ADI WINARTO, MARGARETHA MULATSIH KANDI, AULIA IRHAMNI FAJRI
Bogor Agricultural University, Indonesia
O-30-4  **Difference of Gelatin Quality Goat Leather and Fur**
Amertaningtyas Deces, Jaya Firman
Faculty of Animal Husbandry Brawijaya University

O-30-5  **Preliminary study of ethanol extract of Phyllanthus acidus L. (Skeels) leaves as natural antioxidant in raw and cooked ground pork**
Thi Kim Tuyen Nguyen, Pilasombut Komkhae, Laosinwattana Chamroon
King Mongkut’s Institute of Technology Ladkrabang

O-30-6  **The study of long time feed of low level radioactive contaminated hay to animal health and animal products**
Junyou Li¹, Chunxiang PIAO², Hirohiko ITSUKA¹, Shigeru HASEGAWA¹, Masanori IKEDA¹, Tomotsugu TAKAHASHI¹, Yoshinosuke FUKUMOTO³, Natsuko KOBAYASHI³, Atsushi HIROSE³, Keitaro TANO³, Keiichiro MAEDA⁴
¹Animal Resource Science Center, Graduate School of Agricultural and Life Sciences, The University of Tokyo,
²Department of Agricultural Resources and Environment, Faculty of Agricultural, Yanbian University,
³Graduate School of Agricultural and Life Sciences, The University of Tokyo,
⁴Department of Veterinary Medical Sciences The University of Tokyo

O-30-7  **Effect of Ractopamine Supplementation in Diets on Longissimus Muscle Characteristics of Finishing Pigs**
Krongkaew Kaewthaworn¹, Ronachai Sitthigripong¹, Chanporn Chaosap², Kamon Chaoweewan³
¹Faculty of Agricultural Technology, King Mongkut’s Institute of Technology Ladkrabang, Thailand,
²Faculty of Industrial Education, King Mongkut’s Institute of Technology Ladkrabang, Thailand,
³Department of Livestock Development, Thailand

O-30-8  **Effect of dipping in Longan seed extract phenolic solution on the shelf life and quality of pork under refrigerated storage**
Julakom Panatuk¹, Wantamas Jantasin¹, Kridda Chukiatsiri¹, Tanom Tathong³, Suthipong Uriyapongson³
¹Faculty of Animal Science and Technology, Maejo University, Thailand,
²Program in Food Technology, Faculty of Agriculture and Technology, Nakhon Phanom University, Thailand,
³Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand

O-30-9  **Effects of various types and high additional levels of sugars on color and sensory attributes of Chinese-style pork jerky**
Chih-Ming Chen, Hsien-Tang Lin, Pei-Shan Wu, Ching-Yi Pan, Rui-Lin Chang
National Pingtung University of Science and Technology

O-30-10  **Myosin Heavy Chain Expression of Purebred and Crossbred Pig**
Wuttikorn Buajoom, Chanporn Chaosap, Panneepa Sivapirunthep
King Mongkut’s Institute of Technology Ladkrabang Faculty of Industrial Education

**Oral Session 31: Hygiene / Animal Physiology & Anatomy**
Thursday, 25 August 11:00-13:00 Room N204

**Chairs:** Narayana H Mohan ICAR-National Research Centre on Pig
Fitriyanto Agus Nanung Gadja Mada University

O-31-1  **Quality of Liquid Organic Fertilizer from Rabbit’s Urine with The Addition of Nitrifying Bacteria, Urea, and Leucaena leucocephala**
Theresia Galuh Wandita, Setyo Rahmat Darmawan, Suharjono Triatmojo, Nanung Agus Fitriyanto
Faculty of Animal Science and Industry, Universitas Gadjah Mada
0-31-2 Improving Methane Gas Production from Wastepaper by Adding Surfactant during Pretreatment with Rumen Fluid
Shuhei Takizawa¹, Yasunori Baba², Chika Tada¹, Yasuhiro Fukuda¹, Yutaka Nakai¹
¹Laboratory of Sustainable Animal Environmental Science, Graduate School of Agricultural Science, Tohoku University, Japan,
²Research Institute for Bioresources and Biotechnology, Ishikawa Prefectural University, Japan

0-31-3 ISOLATION OF INDIGENOUS DENITRIFYING BACTERIA FROM THE ODOROUS REGION OF AN LAYER FARM AND ITS POTENTIAL AS NITRATE REDUCING AGENT
Agus Fitriyanto Nanung¹, Amalia Ditasari¹, Erwanto Yuny¹, Pertiiwiningrum Ambar¹,
Triatmojo Suvarjono¹, Bachruddin Zaenal¹, Wihandoyo¹, Tomoyuki Nakagawa³, Takashi Hayakawa²
¹Faculty of Animal Science Gadjah Mada University Indonesia,
²Faculty of Applied Biological Sciences Gifu University Japan

0-31-4 Volume reduction of cattle rumen fluid using a coagulation-flocculation process and its capability for lignocellulose degradation and methane production
Kenichi Abe, Shuhei Takizawa, Yasuhiro Fukuda, Chika Tada, Yutaka Nakai
Laboratory of Sustainable Environmental Biology, Graduate School of Agricultural Science, Tohoku University, Japan

0-31-6 Central administration of neuropeptide Y acts as an anti-stress factor in heat exposed chicks
Mohammad A Bahry¹, Vishwajit S Chowdhury², Hui Yang¹, Phuong V Tran¹, Phong H Do¹, Guofeng Han¹,
Mitsuhiro Furuse¹
¹Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan,
²Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan

0-31-7 A Study on Fat Deposition from 1-6 Months of Age in Northeast Thailand Indigenous Pigs
Nitchanan Chukerd¹, Pongchan Na-Lampang², Putthaporn Pumrojana¹, Nantiya Saetiew¹,
Watchara Ninphet¹
¹Division of Animal Science, Faculty of Science and Technology, Muban Chombueng Rajabhat University,
²School of Animal Production Technology, Institute of Agricultural Technology, Suranaree University of Technology

0-31-8 Effect of oral administration of colostrum on immune function in the goat digestive tract
Shoko Matsukawa, Toshihisa Sugino, Yukinori Yoshimura, Naoki Isobe
Hiroshima University

0-31-9 Effect of steroid hormone on innate immune response induced by Staphylococcus aureus in mammary gland of goat
Naoki Isobe, Kenta Kuwahara, Yukinori Yoshimura
Hiroshima University

0-31-10 Effect of temporary cessation of milking on antimicrobial components in goat milk
Jo Ueda, Yukinori Yoshimura, Naoki Isobe
Hiroshima University
Chair: Manoj Kumar Gendley
College of Veterinary Science and A.H., Chhattisgarh Kamdhenu University

O-32-1 Influence of Chromium on Nutrient Utilization and Blood Biochemical Parameters in goat
Manoj Kumar Gendley, S. P. Tiwari, U.K. Mishra
Chhattisgarh Kamdhenu University, India

O-32-2 Effect of fermented juice from fruit peels to use as an additive for improved quality of roughage
Yupha Seesawhea¹, Pornpan Saenphoom¹, Smerjai Bureenok², Anan Chaokaur¹, Suphavadee Chimtong¹, Attapol Tiantong¹
¹Faculty of Animal Sciences and Agricultural Technology, Silpakorn University,
²Faculty of Sciences and Liberal Arts, Rajamangala University of Technology Isan

O-32-3 In Situ Degradation Characteristics of Indigofera zollingeriana at Different Cutting Intervals during Wet and Dry Season
Edgar Orden¹, Romero Loretta², Del Rosario Neal¹, Galamgarm Jovani¹, Gonzales Rhanny¹
¹Central Luzon State University, ²Benguet State University

O-32-4 NUTRIENT CONTENT OF COMPLEAT FEED BASE ON FERMENTED OF PALM OIL FROND FOR RUMINANT
Astuti Tri¹, Yelni Gusni¹,², Rofiq M. Nasir², Santoso Uriq Santoso¹, Amir Yusrizal¹
¹Muara Bunge University, ²Agency for The Assessment and Application of Technology (BPPT),
³Bengkulu University, ⁴STA Yasni

O-32-7 The effect of supplementation ginger (Z. Officinale) powder on feed consumption, milk production and components of goat
Yuni Suranindyah, Nurliyani Nurliyani, Budi Prasetyo Widyobroto
Universitas Gadjah Mada

O-32-8 USING LOCALLY TREE FOR FEEDING GOAT IN BINANGUN REGION, BLITAR DISTRICT EAST JAVA, INDONESIA
Asmah Hidayati
Faculty of Agricultural Animal Science, University of Muhammadiyah Malang

O-32-9 EVALUATION OF COMPLETE FEEDS FOR RAISING DUAL- PURPOSE SHAMI GOATS UNDER MALAYSIA ENVIRONMENT
Wan Zahari Mohamed¹, Rozaini Abdul Rahman², Mohd Mokhtar Arshad¹, Mohd Sharif Salleh¹, Abd Rahman Aziz¹

O-32-10 Effect of soybean (Glicine max, Merrill) epidermis level in diet on protein content and in vitro gas production test parameters
HARTUTIK HARTUTIK, Marjuki Marjuki
Faculty of Animal Husbandry, Brawijaya University
Oral Session 33: Animal Nutrition (Ruminants) (3)

Thursday, 25 August 11:00-13:00 Room N302

Chair: Pin Chanjula  Prince of Songkla University

O-33-1 In vitro digestibility of fermented rice straw supplemented with cassava tuber and leaves using ruminal fluid of Bali cattle
Cuk Tri Noviandi, Zazin Mukmila, Ristianto Utomo, Subur Priyono Sasmito Budhi, Ali Agus, Andiyani Astuti
Faculty of Animal Science, Universitas Gadjah Mada, Indonesia

O-33-2 Rumen contents from slaughter house as alternative feed for replacing forage in ruminant diets
Ristianto Utomo, Lies Mira Yusiati, Cuk Tri Noviandi, Aryogi, Isnandar
1 Faculty of Animal Science, Universitas Gadjah Mada, Indonesia; 2 Indonesian Beef Cattle Research Station, Indonesia; 3 National Animal Husbandry Training Center, Indonesia

O-33-3 Influences of Parts of Frond Ensilage and Pelleting Methods on Chemical Physical and Degradability of Pellet Ensiled Oil Palm Frond
Ongarge Insung
Rajamangala University of Technology Srivijaya

O-33-4 Voluntary feed intake, rumen fermentation and microbial protein synthesis of beef cattle fed fermented cassava starch residue
Ruangyote Pilajun
1 Department of Animal Science, Faculty of Agriculture, Ubon Ratchathani University, Thailand; 2 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand

O-33-5 The influence of sowing date and trellising on the flowering of some promising herbaceous legumes for eastern Indonesia
Jacob Nulik, Evert Hosang, Debora Kana Hau, Yanto Liunokas, Yendri Aby, Yakobus Uran
1 Department of Agriculture and Fisheries (Queensland), 2 Departemen Pertanian Balai Pengkajian Teknologi Pertanian-NTT (BPTP-NTT)

O-33-6 BIOCONVERSION OF COCOA POD HUSK THROUGH FERMENTATION WITH MOL RUMENT CONTENT AS RUMINANT FEED
Nurhaita Nurhaita, Deñiati Neli, Sulasih Suliasih
Muhammadiyah University of Bengkulu

O-33-7 Nutrients Quality of Fermented Complete Feed Based on By-Product of Sago (Metroxylon sp.) and Cassava (Mannihot esculenta Cranz)
Masitah Siti, Utomo Ristianto, Noviandi Cuk Tri
Faculty of Animal Science Gadjah Mada University

O-33-8 Improving Rice Straw Quality by Treated with Monosodium Glutamate by-Product (MSGB) for Ruminant Diets
Phongthorn Kongmum, Sittisak Kongsin, Nuttareakha Polsiri, Somkiert Prasanpanich, Kanokporn Punpeng, Choawit Rakangthong, Chaiyapoom Bunchasak, Wiriy Loongyai, Theerawit Poeiakhampa
Department of Animal Science, Faculty of Agriculture, Kasetsart University, Thailand
O-33-9  Studies on cashew nut shell liquid withdrawal traits and its effect on methanogenesis and methanogen population in bovine rumen
Abras Arfan, Makoto Kondo, Tomomi Ban-Tokuda, Hiroki Matsui
1 Department of Animal Science, Agriculture faculty of Sriwijaya University, Indonesia.
2 Graduate School of Bioresources, Mie University, Japan

O-33-10  NUTRIENT DIGESTIBILITY AND BIOAVAILABILITY OF MINERALS IN BEEF CATTLE FED WITH DIFFERENT LEVELS OF CONCENTRATE AND OIL PALM STEM-LEAF
Warley Lili, Suyitman, Evitayani, Fariani Armina
1 Department of Animal Nutrition and Feed Technology, Faculty of Animal Science Andalas University, Indonesia.
2 Department of Animal Nutrition, Faculty of Agriculture Sriwijaya University, Indonesia

Oral Session 34: Animal Nutrition (Non-Ruminants) / Small Ruminants
Thursday, 25 August 11:00-13:00 Room N303

Chairs: Hirokuni Miyamoto Chiba University
Takeyuki Ozawa Nippon Veterinary and Life Science University

O-34-1  Establishment of Indicators for Intestinal Health Evaluation in Red Pandas
Fang-Yu Kuo, Yi-Ming Wang, I-Lin Tsai, Chia-Neng Chung, Wan-Ying Chen, Han-Tsung Wang, Mei-Fong Lin
1 National Taiwan University, 2 Taipei Zoo, 3 Chinese Culture University

O-34-2  Determination of the energy content and amino acid digestibility of double-low rapeseed cakes fed to growing pigs
Peili Li, Fei Wu, Yifan Chen, Panpan Guo, Zhongchao Li, Ling Liu, Changhua Lai
State Key Laboratory of Animal Nutrition, Ministry of Agriculture Feed Industry Centre, China Agricultural University, P.R. China

O-34-3  Effects of particle size, adaptation period and evaluation methods on estimates of available energy content and nutrient digestibility of wheat
Yuanfang Fan, Panpan Guo, Yuyuan Yang, Tian Xia, Ling Liu, Yongxi Ma
State Key Laboratory of Animal Nutrition, China Agricultural University

O-34-5  Efficacy of Probiotics (BACTOSAC-P) in Nursery-Fattening Pigs Diets
Sawitree Wongtangtham, Winai Jaikan, Jowaman Khajaren, Nataya Banglarp, Pairat Thitisak
1 Khon Kaen University, 2 K.M.P. Biotech Co., Ltd., Thailand

O-34-6  Investment in Research and Development Programs on Goat in Central Luzon, Philippines
Maria Excelsis Orden, Fe Porciuncula, Edgar Orden
Central Luzon State University

O-34-7  Backyard Raisers’ Attitudes Toward Artificial insemination in Goat in the Philippines
Jackielou Gallarde, Maria Excelsis Orden, Aubrey Balbin, Ana Marie Alo, Jamilla Fatima Saturno, Frederick Goyoy
1 Central Luzon State University, 2 Isabela State University, 3 Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development

Patricia Barcelo, Anna Marie Alo, Edwin Vilar, Emilio Cruz, Anita Asuncion, Juvidel Jaye Castillo, Neal Del Rosario, Rolando Hipe, Jullnar Pepito, Nathaniel Naanep, Reynaldo Ejercito, Maria Excelsis Orden
Don Mariano Marcos Memorial State University
O-34-9 Milk Composition of Upgraded Philippine Native Goats
Neal Del Rosario, Edgar Orden, Emilio Cruz
Small Ruminant Center, Central Luzon State University

O-34-10 Antioxidant properties and honey protein of indigenous honey bees of Indonesia
Firman Jaya, Lilik Eka Radiati
Dept. Animal Food Technology, Faculty of Animal Husbandry, Brawijaya University, Indonesia

Oral Session 35: Animal Welfare & Health Management

Thursday, 25 August 14:00-16:00 Room S207

Chairs: Virginia Venturina Central Luzon State University
Peter Windsor The University of Sydney

O-35-1 Activation of RAW264.7 macrophages by the antimicrobial peptide sublancin: involvement of MAPK and NF-κB signaling pathways
Shuai Wang, Qianhong Ye, Qing Yang, Xiangfang Zeng, Shiyan Qiao
State Key Laboratory of Animal Nutrition, Ministry of Agriculture Feed Industry Centre, China Agricultural University

O-35-2 Monitoring system of body temperature in calves by using infrared thermography
Tohru Suzuki, Yuichi Yoshinaga, Masafumi Miyata, Syoichi Kimura, Ken Katsuda
1 National Institute of Animal Health, NARO, 1 Nippon Avionics Co., Ltd.

O-35-3 Internal parasite control in large ruminants by use of anthelmintic medicated urea molasses blocks
Peter Windsor, Teresa Nemanic, Nicole Selwood, Nichola Calvani, Syseng Nampanya, Sothoeun Suon, Russell Bush
Faculty of Veterinary Science, University of Sydney

O-35-4 Physiological parameters of young cattle transported from Hawaii to US west coast during summer.
C.N. Lee, T. Sy, A. Stokes, T Richards
Dept. of HNFAS, University of Hawaii-Manoa, USA

O-35-5 FIELD TRIAL ON THE EFFICACY AND TOXICITY OF SELECTED FASCIOLICIDES IN BUFFALOES (Bubalus bubalis).
NORAINE MEDINA, Jose Vien Blas, Virginia Venturina, Claro Mingala
1 Central Luzon State University, College of Veterinary Science and Medicine, 2 Philippine Carabao Center

O-35-6 Preculture freezing and incubation on bacteriological isolation from subclinical mastitis milk samples in dairy cows
Tipwadee Prapaiwong, Chaiwat Jarassaeng, Chalong Wachirapakorn, Arunee Ritthiphanan
1 Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Department of Surgery and Theriogenology, Faculty of Veterinary Medicine, Khon Kaen University, Thailand

O-35-7 Do ruminants experience nausea?: The effects of administration of "cisplatin", an emetic agent, on goats
Masato Aoyama, Minami Shioya, Satoshi Yoshida, Yume Tsukamoto, Shohei Sugita
Utsunomiya University Faculty of Agriculture

O-35-8 FIELD VALIDATION OF FAMACHA SYSTEM IN THE ESTIMATION OF DEGREE OF ANAEMIA IN GOATS WITH HAEMONCHOSIS
Virginia Venturina, Rominick Mariano, Efren Celestino, Virgilio Viernes
Central Luzon State University
O-35-9 Stable Management and Colic Prevalence with Different Condition in Indonesian Horse Farming
Yulianto Muhammad Danang Eko, Baliarti Endang, Adi Amien Fahrianto
Department of Animal Production Faculty of Animal Science Universitas Gadjah Mada

O-35-10 The Learning Achievement on the OIE Standards in Animal Welfare at Slaughter and Transportation Training Program of Farmers
Cherdpong Kheerajit
Kaesart University

Oral Session 36: Poultry Science & Industry (2)
Thursday, 25 August 14:00-16:00 Room N201

Chair: TBD

O-36-1 The Effect of Lighting Regimens on Broiler Growth: Status of Corticosteroid Hormone and Feeding Behaviour
Sri-Harimurti Sri-Harimurti, Diah Reni-Asih, Wihandoyo Wihandoyo, Heru Sasongko, Sri Sudaryati, Bambang Aryadi, Muhammad Mauludin
Universitas Gadjah Mada

O-36-2 Effects of Genotypes, Rearing System and Sex on Meat Yield Characteristics of Chicken at 48 Weeks of Age
Department of Animal Husbandry and Veterinary Science, University of Rajshahi, Bangladesh,
Research Institute for Applied Mechanics, Kyushu University, Japan,
Department of Zoology, University of Rajshahi, Bangladesh

O-36-3 Analysis of growth curves in Betong chicken
Mongkol Thepparat, Sunee Trimanee, Pitchayanipa Klomtong, Santi Mhadmhan
Songkla Rajabhat University,
Department of Livestock Development,
Prince of Songkla University

O-36-4 Phenotypic and functional differences among γδ T cell subsets in chicken
Min Jeong Gu, In Kyu Lee, Kwang Hyun Ko, Girak Kim, Tae Sub Park, Byung-Chul Park,
Cheol-Heui Yun
Department of Agricultural Biotechnology and Research Institute for Agriculture and Life Sciences, Seoul National University, Korea,
Institute of Green Bio Science Technology, Seoul National University, Korea

O-36-5 The Productivity Performance of Male and Female Kumbang Janti Duck Reared Intensively
Tertia Delia Nova, Rijal Zein
Andalas University Animal Science

O-36-6 Expression patterns of taste sensors in oral and gastrointestinal tissues of chickens
Fuminori Kawabata, Yuko Kawabata, Yuta Yoshida, Momoko Higashida, Hikaru Ohmori, Shotoro Nishimura, Shoji Tabata
Laboratory of Functional Anatomy, Faculty of Agriculture, Kyushu University

O-36-7 6-Methoxyflavanone as the antagonist for functional bitter taste receptors in chickens
Bapon Dey, Fuminori Kawabata, Yuko Kawabata, Shotaro Nishimura, Shoji Tabata
Laboratory of Functional Anatomy, Faculty of Agriculture, Kyushu University, Japan
O-36-8 Effects of dried spineless cactus feeding on growth, egg production and plasma constituent in Nagoya Cochín chicken
Yoshiaki Hayashi, Yagi Wakana, Ichimura Satoshi
Faculty of Agriculture, Meijo University

O-36-9 Improving Egg Quality of Laying Hens by Addition of Morinda citrifolia Leaves and Fruits
Tengku Eduard Azwar Sinar¹, Tuty Maria Wardiny¹, Anuraga Jayanegara²
¹Department of Agribusiness, Open University of Indonesia,
²Department of Nutrition and Feed Technology, Bogor Agricultural University, Indonesia

O-36-10 The Use of Morinda citrifolia Leaves and Fruits for Lowering Cholesterol Contents of Laying Eggs
Tuty Maria Wardiny¹, Wiranda Gentini Piliang³, Latifah K. Darusman³, Anuraga Jayanegara²
¹Department of Agribusiness, Open University of Indonesia,
²Department of Nutrition and Feed Technology, Bogor Agricultural University, Indonesia,
³Department of Chemistry, Bogor Agricultural University, Indonesia

Oral Session 37: Animal Reproduction (3)
Thursday, 25 August 14:00-16:00 Room N202

Chair: Naoko Kimura Laboratory of Animal Reproduction, Graduate School of Agricultural Science

O-37-1 IDENTIFICATION OF REPRODUCTIVE PERFORMANCE OF ETTAWA CROSSbred BREED GOATS ON DIFFERENT BODY CONDITION SCORE USING VAGINAL SMEAR
Dewi Wahyu Puspitasari, Sigit Bintara, Kustono, Ismaya, Adiarto, Yustin Yuni Sutanindyah
Faculty of Animal Science, Gadjah Mada University, Indonesia

O-37-2 Dietary Yeast (Saccharomyces cerevisiae) Probiotic for Growth Performance, Body Weight and Semen Quality Enhancements in Goats
Jatuporn Kajaysri, Umaporn Rungroekrit, Chaiwat Chumchoung
Clinic for Obstetrics Gynecology Andrology and Artificial Insemination of Domestic Animals, Faculty of Veterinary Medicine, Mahanakorn University of Technology, Thailand

O-37-3 EFFECT OF LONG DISTANCE TRANSPORT ON THE VIABILITY OF FRESH AND FROZEN-THAWED GOAT EMBRYOS STORED IN A PORTABLE INCUBATOR
Flocerfida Aquino, Ester Flores, Eufrayina Atabay
Philippine Carabao Center

O-37-4 THE QUALITY AND Ca²⁺ INTENSITY CHARACTERS OF LOCAL INDONESIAN GOAT SPERM AFTER FREEZING BY NONCONVENTIONAL METHODS OF CRYOPRESERVATION
Gatot Ciptadi¹, Agus Budiarjo¹, Sri Rahayu², Sri Wahjuningsih², Muhammad Nasich¹,
Muhammad Nur Ihsan¹, Fatchiyah Fatchiyah², G. Ciptadi Mudawamah³
¹Faculty of Animal Husbandry, Brawijaya University, ²Faculty of Basic Sciences, Dept. Of Biology, Brawijaya University,
³Faculty of Animal Husbandry, Islamic University of Malang

O-37-5 EFFECT OF DIFFERENT CRYOPROTECTANTS ON THE VIABILITY OF CRYOPRESERVED BOER GOAT SPERM CELLS IN THE PHILIPPINES
Aubrey Joy Balbin
Isabela State University, Philippines

O-37-6 Major proteins in caprine seminal plasma
Thunchara Theparat¹, Jittasak Maungkhiow², Chanyut Kasol³, Jakkapop Chansaad³,
Narong Leincharoen³, Sittirak Roytrakul³
¹Prince of Songkla University, Thailand, ²Department of Livestock Development, Thailand,
³National Center for Genetic Engineering and Biotechnology, Thailand
O-37-7 INFLUENCES OF CUMULUS CELLS DURING IN VITRO FERTILIZATION OF GOAT OOCYTE
Wahjuningsih Sri, Nur Ihsan Muhammad, Sasmito Djiati Muhammad, Isnaini Nurul
University of Brawijaya

O-37-8 C3b component contributes to maintenance of pregnancy by inducing immune tolerance in mouse
Sayuri Fukushima¹, Keigo Nakamura¹, Kazuhiro Imakawa², Yoshihito Suda³
¹ Miyagi University School of Food, Agricultural and Environmental Sciences.
² The University of Tokyo Graduate School of Agricultural and Life Sciences.

O-37-9 AkR1a deficiency in mice decreases ascorbate synthesis but improves developmental potential of oocytes matured in vitro
Naoko Kimura¹, Yuki Hoshino¹, Ren Watanabe¹, Yoka Okabe¹, Motoko Takahashi¹, Satoshi Miyata¹,
Aya Umeno¹, Yasuzaku Yoshida¹, Junichi Fuji¹
¹ Laboratory of Animal Reproduction, Graduate School of Agricultural Science, Yamagata University,
² Department of Biochemistry, Sapporo Medical University School of Medicine,
³ Department of Internal Medicine, Osaka Hospital, Japan Community Healthcare Organization,
⁴ Health Research Institute, National Institute of Advanced Industrial Science and Technology (AIST),
⁵ Department of Biochemistry and Molecular Biology, Graduate School of Medical Science, Yamagata University,
⁶ Laboratory of Animal Reproduction, United Graduate School of Agricultural Sciences, Iwate University.

O-37-10 The corpus luteum is a source and target of insulin-like factor 3 (INSL3) in pregnant goats
Ali M Pitta¹,², Itaru Minagawa¹,², Hiroshi Sasada¹, Kazuyoshi Hashizume¹, Tetsuya Kohsaka¹,³
¹ Laboratory of Animal Reproduction and Physiology, Faculty of Agriculture, Shizuoka University, Japan;
² Division of Animal Resource Production, The United Graduate School of Agricultural Science, Gifu University, Japan;
³ Laboratory of Animal Reproduction, School of Veterinary Science, Kitasato University, Japan.

Oral Session 38: Meat & By-products (2) / Beef Cattle & Industry
Thursday, 25 August 14:00-16:00 Room N203

O-38-1 Innovation Technology of Functional Chicken Sausage Formulated Using Microencapsulated Mixture of Sellaroides spp) and Clarias sp Fish Oil
Minarny Gobel
Tadulako University Central Sulawesi Indonesia

O-38-2 The Physical and Chemical Properties of Gelatin Extracted From Chicken Leg Skin
Meity Sompie, Wiesje Ponto, Jerry Kalele, Friets Ratulangi
Faculty of Animal Science, Sam Ratulangi University

O-38-3 EFFECT OF 2% SODIUM LACTATE ON MEAT QUALITY AND MICROBIOLOGICAL PROPERTIES OF BROILER BREAST MEAT
Gnanarathna S H, Herath H M G P, Damith Udayanga²
¹ Sabaragamuwa University of Sri Lanka, Belihuloya, Sri Lanka; ² Nelma Farm Pvt Ltd, Sri Lanka

O-38-4 The Physicochemical Properties of Refined Duck Fat in Taiwan
Hsin-Jung Lee, You-Ting Chiu, Meng-Ru Lee
¹ Animal Products Processing Division, Livestocks research Institute, Taiwan; ² Shin-Sei Frozen Foods Co., LTD, Taiwan
O-38-5 THE EFFECT OF TAPIOKA FLOUR ADDITION ON THE QUALITY OF SAUSAGE MIXTURE OF CHICKEN AND TUNA FISH
Agnes Triastih Agustio¹, Meity Sompie², Nurmelita Taher⁴, Erwin H B Sondakh⁴, Christina Yunus²
¹Faculty of Fisheries and Marine Sciences, Sam Ratulangi University.
²Faculty of Animal Husbandry, Sam Ratulangi University.

O-38-6 The Effect of Super Red Dragon Fruit (Hylocereus costaricensis) Peels on Physico Chemical, Antioxidant y and Microstructure of Chicken Sausage*
Lilik Eka Radiati¹, Firman Jaya¹, Dita Eka Oktavianingtyas², Fayca³
¹Brawijaya University

O-38-7 Fukuoka Livestock Hygiene Service Center supports hygiene of Hakata Wagyu
Riki Hiromatsu¹, Kyohei Hamada¹, Hiroki Ito¹, Tatsuro Hifumi¹, Torata Ogawa¹, Hiroaki Ryuo²,
Yoshihiro Isozaki¹, Kazuki Ishibishi¹, Kazuhiko Imamura²
¹Fukuoka Livestock Hygiene Service Center; ²Livestock Industry Division of Fukuoka Prefecture

O-38-8 THE EFFECT OF SEASON ON THE BOTANICAL COMPOSITION AND QUALITY OF FEEDSTUFF USED IN BALI CATTLE FATTENING AT SMALLHOLDER FARMS
Paulus Kla Tuhuk¹, Subur Priyono Sasmito Budhi², Panjono Panjono², Endang Baliarti²
¹Timor University, ²Gadjah Mada University

O-38-9 Participation of local Sumbawanese and Balinese migrant women in cattle production system in Sumbawa eastern Indonesia
S R Thei¹, Y A Akhyar², H Hermansyah³, L Xie¹, M Cosijn³
¹Faculty of Agriculture University of Mataram, Indonesia
²Faculty of Animal Science University of Mataram, Indonesia
³CSIRO Australia, Australia

O-38-10 Changes in bali cattle production systems in sumbawa, eastern indonesia and the implications on feed supply systems
H Hermansyah¹, Y A Sutaryono¹, D H Sofyan¹, S H Dilaga¹, L Xie², M Cosijn³
¹Faculty of Animal Science University of Mataram, Indonesia
²CSIRO Australia, Australia

Oral Session 39: Feeds & Feeding (Ruminants) (4)
Thursday, 25 August 14:00-16:00 Room N301

Chair: TBD

O-39-1 Supplementation of mineral (Phosphor and Sulfur) and Saccharomyces cerevisiae in diet based of Cocoa by product of Sheep
Mardiati Zatn, Irsan Ryanto, Erpomen Erpomen
Andalas University

O-39-2 Effect of alfalfa hay feeding on nitrogen utilization of Simmenthal beef cattle kept in Gansu province, China
Toshiyoshi Ichinoh¹, Atsushi Tsunekawa², Tianhui Yan³, Xianjiang Chen⁴, Fujiang Hou⁵,
Nobuyuki Kobayashi⁶
¹Faculty of Life and Environmental Science, Shimane University, Japan,
²Arid Land Research Center, Tottori University, Japan,
³Agrifood and Biosciences Institute, UK,
⁴College of Pastoral Agriculture Science and Technology, Lanzhou University, China
O-39-3 Yield and forage quality in the canopy of napiergrass genotypes
Hamid Kadwai, Yasuyuki Ishii, Yusuke Iki, Sachiko Idota
1 Interdisciplinary Graduate School of Agriculture and Engineering, University of Miyazaki, Japan
2 Faculty of Agriculture, University of Miyazaki, Japan
3 Graduate School of Agriculture, University of Miyazaki, Japan

O-39-4 Evaluation of adaptability of Brachiaria cultivars in the temperate and humid area of Japan
Genki Ishigaki, Pattama Nitthaisong, Yogi Sidik Prasogo, Kiichi Fukuyama, Ryo Akashi
Faculty of Agriculture, University of Miyazaki, Japan

O-39-5 EFFECT OF Aerva lanata AND Cassia auriculata EXTRACTS AND SYNTHETIC ANTIOXIDANT: BUTYLATED HYDROXYTOLUENE ON THE RANCIDITY OF VEGETABLE OIL
Kularatne K C Deshani, H M Gayani Priyadarshani Herath, Sumudu Dissanayake
1 Department of Livestock Production Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Sri Lanka
2 Gold Coin Feed Mills (Lanka), Sri Lanka

O-39-6 Effect of different long-term storage with rice bran-CaCO3 of aerobic thermolignocellulolytic inoculums on fiber compound content of fermented rice straw
Andriyani Astuti, Lies Mira Yusiat, Zaenal Bachrutt, Ainiwut Numaowati
Faculty of Animal Science Universitas Gadjah Mada Indonesia

O-39-7 THE EFFECTS OF COCONUT MEAT WASTE AS FEED ALTERNATIVE IN SHEEP RATION ON Cholesterol CONTENT AND MEAT QUALITY
Muhlisin Muhiis, Cuk Tri Novia, Ristianto Utomo, Lies Mira Yusiat
Faculty of Animal Science, Universitas Gadjah Mada

O-39-8 Effects of supplementary mother liquor from mono sodium glutamate on in vitro rumen fermentation of roughage and concentrate as substrates
Hajime Kumagai, Yoshiaki Sato, Motoharu Takeda, Takashi Nakanishi, Lin Wang, Kazato Oishi, Hiroyuki Hirooka
1 Graduate School of Agriculture, Kyoto University, Japan
2 Ajinomoto Co., Inc.

O-39-9 SILAGE QUALITY OF BMR SORGHUM AND SWEET SORGHUM GROWTH ON SEDIMENTATION ULTISOL SOIL
Widi Kurniawan, Syam Rahadi, Rahman Rahman, Luki Abdullah, Panca Dewi, Suprianto Suprianto
1 Faculty of Animal Science, Universitas Halu Oleo, Indonesia
2 Faculty of Animal Science, Bogor Agricultural University, Indonesia
3 SEAMEO Biotrop

O-39-10 CHALLENGES FOR IMPROVING BEEF SUPPLY WHERE LARGE RUMINANT REPRODUCTIVE MANAGEMENT IS ABSENT
Russell David Bush, Nina Matsumoto, Sonevilay Nampanya, Syseng Khounsy, James Robert Young, Katherine Ashley, Peter Andrew Windsor
1 University of Sydney, Faculty of Veterinary Science, Australia
2 Department of Livestock and Fisheries, Lao PDR

Oral Session 40: Animal Nutrition (Ruminants) (4)
Thursday, 25 August 14:00-16:00 Room N302

Chair: Lies Mira Yusiat Universitas Gadjah Mada

O-40-1 ESTIMATION OF MICROBIAL PROTEIN SYNTHESIS BASED ON EXCRETION OF PURINE DERIVATIVES USING SPOT SAMPLING METHODE IN FAT-TAIL AND THIN-TAIL SHEEP
Tutik Lusya Aulyani, Lies Mira Yusiat, Budi Prasetyo Widyobroto, Zaenal Bachrudin, Chusnul Hanim
Faculty of Animal Science, Universitas Gadjah Mada
O-40-2 Effect of Fungal Treated Oil Palm Fronds in the Diet of Goats
Pin Chanjula, Vasun Petcharat, Puwadon Hamchira, Anusong Cherdthong
Prince of Songkla University

O-40-3 Nutritional Status of Kacang Goats Fed Ruminally Undegradable Protein to Improve their Productivity
A Kustantinah, Edwin Indarto, Rusman, I Gede Suparta Budisatria, Retno Adiwinarti
1 Universitas Gadjah Mada, Indonesia, 2 Faculty of Animal Agriculture, Universitas Diponegoro, Indonesia

O-40-4 Effects of replacing concentrate with wet soya milk residue on intake, digestibility and growth performance of goats
Pattaraporn Tatsapong
Naresuan University, Faculty of Agriculture, Natural Resources and Environment

O-40-5 The Sodium nitrate addition in total mixture fermentation of tofu waste as ration on methane production of the rumen fluid
Zaenal Bachruddin, Sifa Latiefah
Gadjah Mada University

O-40-6 Digestibility and Nitrogen Balance of Male Bligon and Kejobong Goat Fed Peanuts Straw
Lies Mira Yusiati, Chusnul Hanim, Dianestu Putra
Faculty of Animal Science, Universitas Gadjah Mada

O-40-7 The comparison of nutrient digestibility of Bligon and Kejobong goats fed king grass and peanuts straw
Chusnul Hanim, Lies Mira Yusiati, I Gede Suparta Budisatria, Fandi Widya Rachman
Faculty of Animal Science, Universitas Gadjah Mada

O-40-8 STUDY FOR DOMINANCE AND NUTRITION OF WEEDS AS FEED IN VARIOUS CROP LAND IN YOGYAKARTA
Bambang Suwignyo, Nafiatul Umami, Nilo Suseno, Wahyudin Wahyudin, Bambang Suhartanto
Faculty of Animal Science, Gadjah Mada University

O-40-9 Effect of whole Krabok seed, krabok oil or krabok residue on in vitro methane production.
Paiwan Panyakaew, Thomas Schonewille, Chalermporn Yougklang, Wouter Hendriks
1 Department of Animal Sciences, Wageningen University, The Netherlands,
2 Department of Animal Science, Faculty of Natural Resources, Rajamangala University of Technology Isan, Sakon-Nakhon Campus, Thailand,
3 Animal Nutrition division, Department of Farm Animal Health, Faculty of Veterinary Medicine, Utrecht University, The Netherlands,
4 Department of Agricultural Technology and Environment, Faculty of Science and Liberal Arts, Rajamangala University of Technology-Isan, Thailand

O-40-10 Determination of energy and protein requirements of sheep in Indonesia using a meta-analytical approach
Anuraga Jayanegara, Muhammad Ridla, Erika B. Laconi, Nahrowi Nahrowi
Department of Nutrition and Feed Technology, Faculty of Animal Science, Bogor Agricultural University, Indonesia
**Oral Session 41: Environment & Behaviour**
Thursday, 25 August 14:00-16:00 Room N303

**O-41-2** Effects of high ambient temperature on physiological responses and brain oxidative condition in growing chickens
Kunio Sugahara\(^1\), So Satoh\(^1\), Alam Mohammad Rashedul\(^1\), Naohiro Nihei\(^1\), Yoshizawa Fumiaki\(^1\)
\(^1\)Utsunomiya University, \(^2\)Chittagong Veterinary and Animal Sciences University

**O-41-4** Monitoring aggressive behavior of male Japanese Large Game (Oh-Shamo) chicks using resident-intruder test
Said Majdood Raihan\(^1\), Atsushi Takenouchi\(^1\), Masaoki Tsuzuki\(^1,2\), Shin-Ichi Kawakami\(^1,2\)
\(^1\)Graduate School of Biosphere Science, Hiroshima University, \(^2\)Japanese Awan Bioresource Project Research Center, Hiroshima University

**O-41-5** Beef Cattle Farmers Attitude towards Environmental and Socioeconomic Development in Yogyakarta Province
Siti Andarwati, Tri Anggraeni Kusumastuti, Gagah Radhitya Widiastena
Faculty of Animal Science, Gadjah Mada University

**O-41-6** BEHAVIOUR OF BALI CATTLE DURING GRAZING IN PALM OIL PLANTATION RIAU, INDONESIA
E Baliarti, B Suhartanto, M Hamdani, A Agus, I.G.S. Budisatria, Panjono, B Suwignyo, B Guntoro, Trisakti, S Bintara, Yuriadi, B A Atmoko, Y Galih, F Aryanti
Universitas Gadjah Mada, Faculty of Animal Science, Indonesia

**O-41-7** Effect of Fishery Related Activities on the Food and Nutrition Situation of Indigenous Community: A Study of Adolescent girl
Shireen Nigar\(^1\), Takeshi Shimosato Jr Abu Torab Md. Abdur Rahim\(^1\)
\(^1\)Interdisciplinary Graduate School of Science and Technology, Shinshu University, \(^2\)Institute for Biomedical Sciences, Shinshu University, \(^3\)Institute of Nutrition and Food Science, Dhaka University

**O-41-8** Design Build Purification Tubes With Alkaline Mineral Adsorbent As Improving The Quality Of Biogas As A source of Renewable Energie
Herwintono Radji
Muhammadiajah University in Malang

**O-41-9** The Use of Sodium Hydroxide As Adsorbent to improve biogas quality At different position of purification tube
Endang Sri Hartatie
Muhammadiajah University in Malang

**O-41-10** Performance of Hissar cattle (Bos indicus) in the Dry Tropics of Sumbawa, Eastern Indonesia
S H Diaga, D Dahanuddin
Faculty of Animal Science University of Mataram, Indonesia
Estimating Consumer’s Response to Livestock Products Food Quality: Evidence from Households in Indonesia

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Introduction
Consumer faces constraint on budget when they make consumption decision to maximize his/her utility. Allocating budget among commodity consumed is a must.

The economic variables, income and prices, and non-economic variable are the most important factors that determine food consumption. Cross-section household data provide household composition, expenditure, quantity consumed of food and nonfood, and other economic, social, and regional differences among households. As income increase, consumption of foods moves to higher quantity and quality food following their taste and preference change.

This paper attempts to study consumers’ response to quality in livestock products foods and estimates quality elasticity with respect to income over time.

Methods
This study was used raw household data record from household expenditure data in urban and rural area of D.I Yogyakarta Province (hereafter DIY Province). The data used come from the detailed expenditure and consumption on food and non-food. The 2011 and 2013 Household Expenditure Survey (SUSENAS) was conducted by Central Bureau of Statistics (CBS) involving sampled-households.

Study of Hicks and Johnson (1968), Gale and Huang (2007) presented methodology to capture effect of quality through a nonlinear Engel relationship. According to their model, Engel curve expresses the relationship between household expenditure and income, as given in equation (1).

\[ e(Y) = pq(Y) \]

Deaton 1988 and Deaton 1997 noted that Engel’s curves using expenditure and quantity approach have always assume a log-linear function. But recent studies (Banks et al., 1997; Tey et al., 2009; Huang and Gale, 2009) have shown that a linear Engel curve cannot describe the real individual behavior.

Expenditure \( e_j \) and quantity demanded \( q_j \) of food items depends on economic and non-economic factor such as household’s demographic variables \( z \).

In this study, we define expenditure equation \( e_j = f(y, z) \) and quantity equation \( q_j = f(y, z) \) using non-linear or quadratic Engel relationship as

\[ \ln q = \alpha + \beta q (1/Y) + \gamma q \ln Y + \mu \]  

Similarly, for expenditure \( e \) and income \( Y \) relationship, equation (2) can be modified as:

\[ \ln e = \alpha + \beta e (1/Y) + \gamma e \ln Y + \mu \]

Estimation of equations (2) and (3) would give values of parameters \( \alpha, \beta, \gamma \). If both \( \beta \) and \( \gamma \) are not equal to zero, then elasticities would be worked out, as follows:

\[ \eta = - \beta q (1/Y) + \gamma q \]  
\[ \varepsilon = - \beta e (1/Y) + \gamma e \]

To analyse consumers’ response to quality over time, we modify equations (2) & (3), incorporating dummy-variable \( D \) for time differences, as follows.

\[ \ln q = \alpha_1 + \beta q_1 (1/Y) + \gamma q_1 \ln Y + \alpha_D + \beta q_D (D/Y) + \gamma q_D \ln (DY) + \mu \]

\[ \ln e = \alpha_1 + \beta e_1 (1/Y) + \gamma e_1 \ln Y + \alpha_D + \beta e_D (D/Y) + \gamma e_D \ln (DY) + \mu \]

Equations (6) & (7) incorporate dummy-variable \( D = 0 \) for base period; \( D = 1 \) for new period) in both of its differential intercept.

Results and Discussion
Using data of 7105 households from SUSENAS Household Survey data for DIY Province, conducted during 2011 and 2013, we estimated equations (6) and (7) for some livestock products. The results of the estimated equations along with diagnostic statistics (t-ratio, F statistic and R2) are provided in Table 1 (equation 6) and Table 2.
The differential intercept and differential slope, in both equations, have turned out to be statistically significant in these livestock products, indicating that significant changes have occurred in quantity and expenditure elasticities during 2013 compared to the base year. The coefficients $\beta_q$ and $\beta_e$, explained in equation (2) & (3), have turned out to be statistically significant in beef, chicken, egg and milk products, suggesting that log-log-inverse (LLI) formulation of the model validate the non-linear behavior of Engel curve for livestock products food in DIY Province. All selected livestock products foods appear to give similar results, with exception of milk (where $\beta_q$ is statistically insignificant) and egg (where $\beta_e$ is statistically insignificant). Quantity elasticity of demand for these livestock products with respect to consumer income is estimated for year 2011 and 2013 (Table 3). Expenditure elasticity with respect to income is estimated for 2011 and 2 The quality elasticity is thus positive and is estimated for 2001 and 2005.

**Conclusions**

The quantity and expenditure elasticities with respect to consumers’ income for livestock products foods have substantial changes during 2013 compared to base period of year 2011. The quality elasticity with respect to consumer’s income turns out to be positive for all livestock products foods. However, it declined in magnitude in almost all livestock products food except for milk products from year 2011 to 2013.

**KEYWORD**: livestock products foods, expenditure elasticity, quantity elasticity, quality elasticity, Indonesia

### Table 1. Empirical Result of Quantity Model

<table>
<thead>
<tr>
<th></th>
<th>Empirical Result</th>
<th>F-Ratio</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>$\ln q = -3.277 - 60632.871 \frac{1}{Y} + 0.199 \ln Y - 0.773 (D)$</td>
<td>16.176</td>
<td>0.108</td>
</tr>
<tr>
<td></td>
<td>(-3.732)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>$\ln q = -4.878 - 33611.288 \frac{1}{Y} + 0.377 \ln Y - 1.151 (D)$</td>
<td>221.128</td>
<td>0.201</td>
</tr>
<tr>
<td></td>
<td>(-16.909)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egg</td>
<td>$\ln q = -4.686 - 7978.866 \frac{1}{Y} + 0.333 \ln Y - 0.910 (D)$</td>
<td>268.419</td>
<td>0.139</td>
</tr>
<tr>
<td></td>
<td>(-24.201)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>$\ln q = -2.085 - 1588.066 \frac{1}{Y} + 0.204 \ln Y - 0.558 (D)$</td>
<td>15.114</td>
<td>0.015</td>
</tr>
<tr>
<td></td>
<td>(-4.282)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Figures in parenthesis represent t-ratios)

### Table 2. Empirical Result of Expenditure Model

<table>
<thead>
<tr>
<th></th>
<th>Empirical Result</th>
<th>F-Ratio</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>$\ln e = 6.927 - 62600.977 \frac{1}{Y} + 0.261 \ln Y - 0.561 (D)$</td>
<td>39.173</td>
<td>0.228</td>
</tr>
<tr>
<td></td>
<td>(7.687)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicken</td>
<td>$\ln e = 3.482 - 25914.287 \frac{1}{Y} + 0.502 \ln Y - 1.214 (D)$</td>
<td>365.436</td>
<td>0.294</td>
</tr>
<tr>
<td></td>
<td>(11.945)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egg</td>
<td>$\ln e = 3.370 - 2936.291 \frac{1}{Y} + 0.446 \ln Y - 0.980 (D)$</td>
<td>546.566</td>
<td>0.248</td>
</tr>
<tr>
<td></td>
<td>(18.561)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td>$\ln e = 0.198 + 7337.349 \frac{1}{Y} + 0.772 \ln Y - 1.947 (D)$</td>
<td>269.610</td>
<td>0.213</td>
</tr>
<tr>
<td></td>
<td>(0.566)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Figures in parenthesis represent t-ratios)
Table 3. Quantity, Expenditure & Quality Elasticity (2011 and 2013)

<table>
<thead>
<tr>
<th></th>
<th>Quantity Elasticity</th>
<th>Expenditure elasticity</th>
<th>Quality elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>-0.435</td>
<td>-0.599</td>
<td>-0.126</td>
</tr>
<tr>
<td>Chicken</td>
<td>-0.197</td>
<td>-0.073</td>
<td>0.098</td>
</tr>
<tr>
<td>Egg</td>
<td>-0.066</td>
<td>0.055</td>
<td>0.191</td>
</tr>
<tr>
<td>Milk</td>
<td>-0.034</td>
<td>-0.091</td>
<td>0.181</td>
</tr>
</tbody>
</table>

REFERENCES
CERTIFICATE OF PRESENTATION

This is to certify that

Mujtahidah Anggriani Ummul Muzayyanah
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Rini Widiati

made an oral presentation on the following paper at
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Mitsuhiro Furuse, Ph.D.
President of the 17th AAAP Animal Science Congress