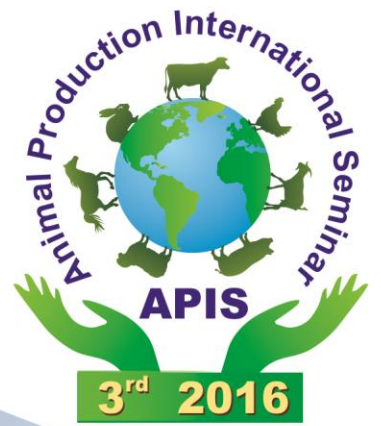


# PROCEEDING



The 3rd Animal Production International Seminar  
The 3rd ASEAN Regional Conference on Animal Production  
3rd APIS & 3rd ARCAP – 2016

Enhancing Synergistic Roles of Stakeholders  
for Development of Sustainable Livestock Production



ISBN : 978-602-432-017-1

**Perpustakaan Nasional: Katalog dalam Terbitan (KDT)**

**Proceeding 3<sup>rd</sup> Animal Production International Seminar (3<sup>rd</sup> APIS) & 3<sup>rd</sup> ASEAN Regional Conference on Animal Production (3<sup>rd</sup> ARCAP)**

© UB Press

Cetakan Ketiga, 2016

Hak Cipta dilindungi Undang-Undang  
*All Right Reserved*

Penulis : Dr.Ir. Marjuki, M.Sc (Ed.)  
Aswah Ridhowi, M.Sc (Ed.)  
Wike Andre, M.Si (Ed.)

Perancang Sampul : Tim Prosiding  
Penata Letak : Tim UB Press  
Pracetak dan Produksi: Tim UB Press

**Penerbit:**



**UB Press**

Jl. Veteran 10-11 Malang 65145 Indonesia

Gedung INBIS Lt.3

Telp : 0341-554357, Fax: 0341-554357 (call)

E-mail : [ubpress@gmail.com](mailto:ubpress@gmail.com)/[ubpress@ub.ac.id](mailto:ubpress@ub.ac.id)

Website : <http://www.ubpress.ub.ac.id>

**ISBN: 978-602-432-017-1**

viii +724 hlm, 21 cm x 29,7 cm

*Dilarang keras memfotokopi atau memperbanyak sebagian atau seluruh buku ini  
tanpa seizin tertulis dari penerbit*

## RECTOR SPEECH

Assalamualaikum warohmatullahi wabarakatuh  
Distinguished Guests and Delegates, Ladies and Gentlemen,

It gives me great privilege and pleasure to extend to you all a very warm welcome on behalf of Brawijaya University and to say how grateful we are to the organizing committee of The Third Animal Production International Seminar (3<sup>rd</sup> APIS) and The Third ASEAN Regional Conference on Animal Production (3<sup>rd</sup> ARCAP) who made this important event happening from today onward. Your attendance in this conference will not be enough before exploring the serendipity of Batu city which has attracted so many visitors in the recent years. It offers you many attractive places to visit varying from leisure facilities to smallholder dairy farms that relevant to the topic of this conference.

The issues of livestock production and food security have been a hot topic of debates all over the world to challenge our capability to feed human population living on earth that is believed will reach 25 billion people by the middle of this millennium. The global call on quality human resources especially in developing countries may not be achieved without adequate supply of animal protein. This has urged animal scientists to make significant effort to increase animal production by inventing new technologies and approaches but have no negative impact on our natural resources because the majority of smallholder farmers face with scarcity of cultivable land to produce adequate quantity and quality fodder for their animals. The practice of uncontrolled fodder scavenging from forest and open land may provoke a serious natural disaster such as landslide, flood and loss of water resources for human beings. Through this stage I would like to extend my concern to all distinguished guests and delegates to pay more attention on sustainable development of animal production that assures our young generation lives on earth safely and happily.

As the rector of Brawijaya University, I am also delighted to welcome you in our green campus sometime in the middle of the conference to hasten mutual collaboration between Brawijaya University and either national or international partners. We are fully aware that in a modern life higher education quality should be built on the basis of collaboration for many reasons. Brawijaya University has 14 faculties that can be grouped into four science trees, that is engineering, humanity, economics, and life sciences. They have been growing significantly not only in the number of student enrollements but many prestigious achievement on research findings, student competitions and administrative transparency are our flagships in the last ten years. Nevertheless, we also realize that first and foremost constraint for any institution is the limit of resources and thereby underpinning the importance of establishing mutual collaboration. It is our opportunities to meet delegates from varying places of origin that open initial discussion for further networking on relevant topics of interests concordance to the main topic of this conference and beyond.

To conclude my address, once again I would like to express my sincere gratitude to all delegates, partners and conference committee who have made this important international conference occurs. I do hope that your stay and participation in these seminar and conference will be fruitful and unforgettable.

By the name of Almighty Allah Swt. I declare that The Third Animal Production International Seminar (3<sup>rd</sup> APIS) and The Third ASEAN Regional Conference on Animal Production (3<sup>rd</sup> ARCAP) are officially open.

Thank you very much  
Wassalamualaikum warohmatullahi wabarokatuh.

Batu, 19 October 2016  
Brawijaya University  
Rector

Prof.Dr.Ir. Mohammad Bisri, MS.

Assalaamu'alaikum wr. wb.

Praise be to Allah, that the International Seminar 3<sup>rd</sup>-APIS could be held this year. This seminar is a routine agenda of the Faculty of Animal Husbandry UB held every three years, and this time held on October 19 to 21, 2016.

For participants come from outside the city of Malang, I proudly would like to say Welcome to the city of Malang and also on the beautiful campus of the University of Brawijaya, especially in the Faculty of Animal Husbandry. I'm sure the cool atmosphere of Malang and Batu, the participants will be able to feel a distinct impression and more enthusiastic in participating in the seminar

When we viewed from a trip APIS, we note that there is significant progress in every APIS's event. It can be noted by increasing the number of participants who submit their abstract / full paper and spread of country or university / institution they came from. This shows that the APIS is increasingly recognized by the researchers or academics community, and but on the other hand might be the number of researchers who want to publish scientific work is also increased.

Now, APIS not only belong to the Faculty of Animal Husbandry University of Brawijaya, but also belong to the universities and researchers in the world who require publish their qualified scientific paper immediately.

APIS is a very effective medium to introduce each other between researchers, as well as a very efficient medium for the information and experiences exchange among the participants. Through the APIS we can know the topics of research being conducted by other researchers in different regions or countries, so that we can develop our future research directions and topic. We can also use APIS meeting as a medium for constructing the research collaboration and networking with researchers from other institutions for strengthening our research foundation. By APIS meeting, some information about new and important problems in the livestock farming and their solutions in the field can be summarized, so it is be expected to be able to overcome some of the problems of animal farming. I am sure, that the scientific information presented in APIS are very important way out of various scientific problems and in practical condition. So that by referring to the new findings of the researchers stated in their scientific works will be able to immediately increase the efficiency of farm businesses and increase in profits for farmers.

Finally, we congratulate to have nice conference and wish all participants having good days for a better future.

Thank you,  
Malang, October 13, 2016

Dean of the Faculty of Animal Husbandry  
University of Brawijaya

Prof. Dr.sc.agr. Ir. Suyadi, MS.

## WELCOME MESSAGE

Following the success of the First and Second Animal Production International Seminar (1<sup>st</sup> and 2<sup>nd</sup> APIS) held in 2010 and 2013, respectively, and based on the proposition during the International Representatives Steering Committee Meeting, The ASEAN Regional Conference on Animal Production (ARCAP) Committee, and Malaysian Society of Animal Production (MSAP), hence, it will be held Collaborative Seminar of The Third Animal Production International Seminar (3<sup>rd</sup> APIS) and The Third ASEAN Regional Conference on Animal Production (3<sup>rd</sup> ARCAP) at Shining Batu city, East Java Province, Indonesia from 19 to 21 October 2016 with the theme of Improving the Synergistic Roles of Stakeholders for Development of Sustainable Livestock Production.

Sustainable development has become globally interesting issue in the last decades, since the environmentally failure of green revolution in agriculture and in some other aspects of development. The developments have been blamed to result in environmental degradation and global climate change (global warming) that dangers for the sustainability of life. Hence, the concept of sustainable developments that are environmentally, economically, socially and finally lively friendly must be practiced in all aspects of development, and as a never ending process to result in the most promising outputs for either the present or the future sustainable lifes.

Livestock production is very well known to have very important and strategic roles for human life as well as the environment. Livestock production is as important source of high quality foods for human, where its requirement must continuously increase and cannot be stopped due to the continuous increase of the human population. Livestock production provides income for most of small farmers in the villages and industries. Livestock also functions as traction, fertilizer, investment or saving, social prides, wool, and fur. However, livestock production has recently been blamed for its contributions to the land degradation and the global climate changes. Livestock production has been blamed to degrade 70% of rain forest area in Amazon, contributes 18% of green house gas, and competing in the use of potential materials either for human food or renewable fuel.

Thus, to improve the important and strategic functions and contributions of livestock production, it is our great honors and pleasures to invite stakeholders in livestock production including scientists, practitioners, decision makers as well as farmers and industries to attend This 3<sup>rd</sup> Animal Production International Seminar (3<sup>rd</sup> APIS) and The Third ASEAN Regional Conference on Animal Production (3<sup>rd</sup> ARCAP) held in the most interesting agriculture complex and exotic tourism city of Shining Batu, East Java Province, Indonesia from 19 to 21 October 2016. The Shining Batu city that is located in the valley of nonactive volcanoes complex, is also known as the oldest dairy cattle production center in Indonesia and also as livestock production center where small, medium, and large scale of livestock production and industries present including dairy cattle, beef cattle, goat, sheep, poultry, pigs, and rabbits.

The seminar is supposed to be a chance for the participants to discuss and exchange the newest information on animal science and technology for improving the prospects and coping the challenges in animal production for its sustainable development. In addition, the seminar will be as a site in establishing and refreshing contacts among animal scientists as well as practitioners for the development of sustainable livestock production.

We strongly expect your active support and participation for the success of the seminar. Finally, we are looking forward to seeing you all in the most interesting city of Shining Batu and enjoying our wonderful traditions, cultures, cuisines, and scenery.

Bismillahirrohmaanirrohiim

Assalamualaikum wa rohmatullahi wa barokaatuh

Our sincerely Rector of Brawijaya University, Dean of Faculty of Animal Husbandry Brawijaya University, very important invited person, keynote speakers, and all of the participants,

In this opportunity, on behalf of the Organizing Committee, I would like to express my deeply thanks and welcoming all of you to attend this Third Animal Production International Seminar and The Third ASEAN Regional Conference on Animal Production (APIS & ARCAP-2016).

The theme of this seminar is **Improving the Synergistic Roles of Stakeholders for Development of Sustainable Livestock Production**. As all of us are aware that sustainable development in all of aspects of our live are very-very important to create a better live not only for ourselves generation but also more importantly for our next-next-next generations. Especially for the development of livestock production, it is not only targeted for the production of sufficient quantity of good quality foods including meat, milk, and egg but also to minimize its contribution to the degradation of environment. As it is very well known that livestock production is not only produce many fruitful functions our live but also has been blamed to cause land degradation, water and air pollution, and to contribute to the global climate change.

For those from this seminar we would like to expect that we can give and share our knowledge, technology, and experiences to give our contribution for the development of sustainable livestock production.

As I got the data from our secretary that this seminar is attended by not less than 300 participants from many different countries including Sudan, Iran, Sri Lanka, India, Thailand, Taiwan, Malaysia, Australia, and of course from all over Indonesia from North Sumatera to West Papua; from different discipline of livestock production including livestock production systems, feeds and nutrition, genetic, breeding, and conservation reproduction, environment and waste management, products processing and food safety, socio-economic and agribusiness of livestock, and veterinary and health care; and from different types of stakeholder including scientists, practitioners, decision makers as well as farmers and industries. For those, I would like again to express my deeply thanks to all of the participants. Please, enjoy our seminar and our most interesting city of Shining Batu and enjoying our wonderful traditions, cultures, cuisines, and scenery.

And finally, last but not least, I wish to thank to all sponsors who have contributed for financial support, to our partner institutions and especially to the organizing committee member who have been working very hard to prepare and ensure the success of this international seminar.

Good Luck and Wassalamualaikum wa rohmatullahi wa barokaatuh.

Chairman

Dr.Ir. Marjuki, M.Sc.

## WELCOME SPEECH FROM MSAP PRESIDENT

### Welcome Speech From MSAP President

It is indeed my pleasure to welcome you to the 3<sup>rd</sup> ARCAP (Asean Regional Conference on Animal Production) to be held in the Shining City of Batu, Malang from 19<sup>th</sup> – 22<sup>th</sup> October 2016. Malaysian Society of Animal Production is proud to be a co-organizer of this conference. ARCAP was mooted by the then president of MSAP Dr Abu Hassan Muhammad Ali, in 2013 and the first ARCAP conference was held in Kuching, Sarawak in June 2014. Representatives from Malaysia, Indonesia, Thailand, The Phillipines, Vietnam, Singapore, Laos and Myanmar were among the invited speakers. Brunei and Cambodia has yet to name their representatives. ARCAP was originally planned to be held every two years in different Asean countries but initially this system was not practical as some member countries were not represented during earlier meetings. The formation of ARCAP was to develop a network within the Asean region, providing a platform where scientists and livestock stakeholders can discuss, collaborate and exchange ideas and information on animal production specific to this region. At present ARCAP is somewhat a loose organization of societies of animal production in the Asean region and therefore look forward to receiving voluntary members to be actively involved. MSAP organized the first and second ARCAP conferences, and fortunately the Faculty of Animal Husbandry, Universitas Brawijaya, has volunteered to organize the 3<sup>rd</sup> ARCAP conference in Batu, Indonesia in conjunction with their 3<sup>rd</sup> APIS. It is hoped that future ARCAP conferences will be will be hosted by other member countries.

Before I end, I would like to thank the organizing committee, and all those involved, for their hard work to make this joint conference a success. Thanks are due to Faculty of Animal Husbandry, Universitas Brawijaya, for providing all the necessary facilities and support for the success of this conference.

Last but not least, I would like to thank all participants of this conference for your support and enthusiasm and hope that you have a fruitful and enjoyable conference.

Prof Dr Abd Wahid Haron

President MSAP 2016/2017



### STEERING COMMITTEE

- Prof.Dr.Sc.Agr. Suyadi, MS. (Brawijaya University, Indonesia)
- Prof.Dr. Kusmartono (Brawijaya University, Indonesia)
- Prof. Ifar Subagiyo, Ph.D. (Brawijaya University, Indonesia)
- Prof. Hendrawan Soetanto, Ph.D. (Brawijaya University, Indonesia)
- Prof.Dr. Abdul Razak Alimon (Universiti Putra Malaysia, Malaysia)
- Prof.Dr. Ali Agus, (Indonesian Society of Animal Science)
- Dr. Abu Hasan (Malaysian Society of Animal Production)
- Prof. Liang Chou Hsia, Ph.D. (National Pingtung University of Science and Technology, Taiwan)
- Prof.Dr. E.R. Ærskov (International Feed Resources Unit, Macaulay Land Use Research Institute-MLURI, Scotland, UK).
- Assoc.Prof. Dr. Sunton Wittayakun (Faculty of Science and Agriculture Technology, Rajamangala University of Technology Lanna, Thailand)
- Prof.Dr. Zaenal Fanani (Brawijaya University, Indonesia)
- Prof.Dr. Djalal Rosyidi (Brawijaya University, Indonesia)
- Prof.Dr. Budi Hartono (Brawijaya University, Indonesia)
- Prof.Dr. Luqman Hakim (Brawijaya University, Indonesia)

### SCIENTIFIC COMMITTEE

- Prof.Dr. Trinil Susilawati (Brawijaya University, Indonesia)
- Prof.Dr. Abdul Razak Alimon (Universiti Putra Malaysia, Malaysia)
- Prof.Dr. Ramli Abdullah (Universiti Malaya, Malaysia)
- Cynthia D.K. Bottema, Ph.D. (University of Adelaide, Australia)
- Prof. Marsetyo, Ph.D. (Tadulako University, Palu, Central Sulawesi, Indonesia)
- Dr.Umar Papatungan (Sam Ratulangi University, Manado, North Sulawesi, Indonesia)
- Assist. Prof.Dr. Wilaiporn Chanchai (Faculty of Science and Agriculture Technology, Rajamangala University of Technology Lanna, Thailand)
- Prof.Dr. Siti Chuzaemi (Brawijaya University, Indonesia)
- Dr. Gatot Ciptadi (Brawijaya University, Indonesia)
- Dr. Lilik Eka Radiati (Brawijaya University, Indonesia)
- Dr. Osfar Sjöfjan (Brawijaya University, Indonesia)
- Dr. Masdiana Ch Padaga (Brawijaya University, Indonesia)
- Dr. Eko Widodo (Brawijaya University, Indonesia)
- Dr. Mashudi (Brawijaya University, Indonesia)
- Dr. Ita Wahyu N (Brawijaya University, Indonesia)
- Hari Dwi Utami, Ph.D (Brawijaya University, Indonesia)
- Anie Eka K., M.Sc (Brawijaya University, Indonesia)

## **ORGANIZING COMMITTEE**

### **Honorary Chairperson**

- Prof.Dr. Mochammad Bisri (Rector/President, Brawijaya University, Malang, Indonesia)
- Prof.Dr. Kusmartono (Vice-Rector of Academic Affair, Brawijaya University, Malang, Indonesia)
- Prof.Dr.Sc.Agr.Ir. Suyadi (Dean, Faculty of Animal Husbandry, Brawijaya University, Malang, Indonesia)

**Chairman** Dr.Ir. Marjuki, M.Sc.

### **General Secretary**

Chairperson Aswah Ridhowi, M.Sc.

Members Wike Andre, M.Si

### **Treasurers**

Chairperson Asri Nurul Huda, MP., M.Sc

Vice-chairperson Dr. Ir. V. M Ani N., M.Sc

### **Secretariat Team**

Chairperson Firman Jaya, MP

Vice-chairperson Dr. M. Halim Natsir

Members Jaisy Aghniarahim Putritamara., MP  
Mr. Arifatul Hafidz Achsan

### **Fund Raising and Sponsorship Committee**

Chairperson Aulia Puspita A. Y., MP., M.Sc

Vice-chairperson Dr. Kuswati,

Member Yuli Frita N., MP., M.Sc

### **Program Committee**

Chairperson Dr. Herly Evanuarini

Members Dr. Siti Azizah

Trianti Djoharjani, M.Agr. St  
Awang Tri Satria, ME

### **Consumption Committee**

Chairperson Dr. Tri Eko Susilorini

Members Dr. Sri Minarti

Aris Sri Widati, MS

Ria Dewi Andriani, MP., M.Sc

### **Receptionist Team**

Chairperson Pospita Sari Hazanah N., MP

Members Premy Puspitawati R., MP

Mulia Winirsya Apriliyani, MP

### **Field Trips Committee**

Chairperson Firmansyah Tri MP

Members Dr. Agus Susilo

Mr. Djarot Sunarto

**Transportation Committee**

Chairperson	Dr. Agus Budiarto
Members	Mrs. Nadhiroh
	Mr. Sutikno
	Mr. Yusuf

**Venue and Documentation Committee**

Chairperson	Nanang Febrianto, MP
Members	Hely Tistiana, MP
	Mr. Kusno Waluyo
	Mr. Rosyidi
	Mr. Zaenal Abidin
	Ms. Dita Anggraini

## OUTLINE OF THE CONGRESS

**Congress Name:**

3<sup>rd</sup> Animal Production International Seminar (3<sup>rd</sup> APIS) & 3<sup>rd</sup> ASEAN Regional Conference on Animal Production (3<sup>rd</sup> ARCAP)

**Themes:**

Enhancing Synergistic Roles Of Stakeholders for development Of Sustainable Livestock Production

**Chairman:**

Dr.Ir. Marjuki, M.Sc (Brawijaya University, Indonesia)

**Date:**

19-21 October 2016

**Venue:**

Royal Orchid Garden Hotel and Condominiums The Shining City of Batu

**Official Website:**

<http://apis.ub.ac.id>

**Secretariat for APIS 2016:**

Faculty of Animal Husbandry Brawijaya University, Malang Indonesia

Telephone +62 341 553513

Mobile/ Line/ WA: +62 857 076 327 91

E-mail : [info.apis@ub.ac.id](mailto:info.apis@ub.ac.id)

## ACKNOWLEDGMENTS

### BRAWIJAYA UNIVERSITY



### INDONESIAN SOCIETY OF ANIMAL SCIENCE



### UNIVERSITI PUTRA MALAYSIA



### MALAYSIAN SOCIETY OF ANIMAL PRODUCTION



### RAJAMANGALA UNIVERSITY OF TECHNOLOGY LANNA



SPONSORS

**FEDLOT INDUSTRY**



**POULTRY INDUSTRY**



**DAIRY FACTORY**



**BEE FARM**



**CHEMICAL REAGENT-  
HOSPITAL & LABORATORY  
EQUIPMENT**



**BRAWIJAYA UNIVERSITY  
BOOKSTORE**



**BRAWIJAYA UNIVERSITY COOPERATIVE**



## GENERAL INFORMATION OF BATU

Batu (Indonesian: Kota Batu, stone city) or officially Kota Batu is a city located in East Java Province of Indonesia. It is situated about 20 km to the northwest of Malang. Formerly, it was a part of Malang Regency; but in 2001, Batu became an independent city legalized by Act No. 11 of 2001, when it became an independent municipal city with its own mayor and council. A population of 190,000 people, it lies on the southern slopes of Gunung Welirang. Its population largely consists of Javanese. The town used to be a recreation place for the Dutch colonial officers in the Dutch colonial area (before 1945). Batu means rock in Indonesian.

### 1) Food

Many different foods are available in Malang including traditional, Chinese, Arabian and European foods.

### 2) Currency and Banking

Indonesian Rupiahs (IDR) are accepted at regular stores and restaurants. Most currencies and traveler's checks can be exchanged at international airport, large branches of major banks and hotels. Banks are open from Monday to Friday, 08.00 – 15.00. We will accept only IDR at the registration desks.

### 3) Time

Malang is in the same time zone with Indonesia Western Standard Time (IWST), +07:00 hour ahead of G.M.T. No daylight saving time is practiced in Malang.

### 4) Electricity

Indonesia use European style two-pin round plugs (c-type). Voltage is at 220 volt 50 Hz.

### 5) Emergency Number

Police in Batu City	: dial +62 341-599045 or 524111
Fire Fighter	: dial +62 341 512111
Ambulance	: dial 119

### 6) Transportation

- To Malang

There are several options to get in Malang. International flights to Jakarta or Denpasar (Bali) International Airport and then domestic flights to Surabaya International Airport or Malang Domestic Airport (many flights a day, approximately 1,5 hours). From Surabaya International Airport by taxi or chartered car to Malang (2-3 hours) passing through Lapindo Mud.

- In Malang

1. The participants can take public transports called as “angkot or mikrolet”, that is a blue van and can pick it up at any places. It will take you to many places around the city. It charges you a fixed cost of Rp 3.500,00 per trip (0.25 USD).

2. Or the participants can take a private taxi equipped with a charge counter that is a sedan car that the participants can also pick it up at any places or order by phone. It will take you to many places around the city. The charge is Rp. 3.500,00 per km (0.25 USD).
3. From Malang to Batu City  
There are several options to go to Malang from Batu City by taxi or chartered car (1 hours) passing through Sengkaling Street.

### **7) Sight Seeing in Malang and Batu City**

- Tugu Monument
- Merdeka Square (down town)
- Ijen Boulevard (with palm tree and Dutch houses design)
- Ceramic Industry in Dinoyo area.
- Agrotourism (tea, orange, apple, strawberry, vegetables in Lawang and Batu highlands).
- Singosari & Jajaghu Temples (ancient and attractive).
- Balekambang Beach (similar to Tanah Lot in Bali)
- Water fall Coban Rondo
- Selecta Garden and swimming pool
- Hot water spring Songgoriti
- Selorejo Lake
- Karangates Dam
- Sengkaling Fun Park
- Jatim Park and Museum
- Night Lives and Cafes
- Bromo, Tengger, and Semeru Volcanos (2-3 hours from Malang)
- Toko Oen (The oldest Dutch Restaurant)
- Malls and super markets

### **8) Culture and arts:**

- Traditional dance
- Handicrafts and souvenirs (traditional mask, ceramics)



## GENERAL INFORMATION OF THE CONGRESS

### 1) Language

- All presentation, discussion and questions must be in English
- Simulation translation is not provided

### 2) Registration

- The registration desks are located at second floor of Royal Orchid Garden Hotel
- Advanced registrants may pick up their Name Badge at the Desk.
- Registration desk will also be set up at Hotel Royal Orchid Garden during the following times on 19<sup>th</sup> October.
- Registration Fees

Category	Before September 25 <sup>th</sup> , 2016		After September 25 <sup>th</sup> , 2016	
	Indonesian	Overseas	Indonesia	Overseas
<b>Participant</b>	<b>1.000.000 IDR</b>	<b>200 USD</b>	<b>1.250.000 IDR</b>	<b>225 USD</b>
<b>Student</b>	<b>750.000 IDR</b>	<b>150 USD</b>	<b>1.000.000 IDR</b>	<b>175 USD</b>
<b>Accompanying Person</b>	<b>750.000 IDR</b>	<b>150 USD</b>	<b>1.000.000 IDR</b>	<b>175 USD</b>

**The payment does not include accommodation (hotel) during the seminar**

**Payment should be made available through bank transfer to:  
Bank Central Asia (BCA) Malang, cq. Asri Nurul Huda, Account Number 315 091 2279  
Swift Code: CENAIJJA**

### 3) Certificate

- Attendance certificates are printed on the same face of Name Badge.
- Certificates will not be issued for accompanying persons.

### 4) Proceedings

Proceedings are provided in USB Flash Memory Stick in your congress bag.

### 5) Congress Bag

Please register your name for a congress bag. One bag per person.

### 6) Lunch

- Lunches will be buffet style on 19 and 21 October.
- The venue for all lunches is “SINGHASARI RESTAURANT” of the Royal Orchid Garden Hotel

- Please note that an accompanying person's name badge will not allow entry into the lunch venue

**7) Coffee Break**

- The venues for coffee breaks are "Panderman Lobby/Hall" of the Royal Orchid Garden Hotel
- Please note that an accompanying person's name badge will not allow entry into the lunch venue

**8) Internet**

- A WI-FI service is available in some areas. However, strongly recommended to use personal connection internet.
- There is no business support center.

**9) Non-Smoking policy**

Smoking is strictly forbidden in the meeting area. Thank you for your cooperation.

**10) Oral and Poster Presentation Place**

- Oral Presentation will be held at Pandeman 1 & 2 room, Semeru room, Anjosmoro Room and Welirang Room of Royal Orchid Garden Hotel.
- Poster presentation will be held at Pandermal Hall of Royal Orchid Garden Hotel

**11) 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 wear accompanying person's name badge.

**12) Others**

- Please wear your Name Badge during the congress. Please note that Name Badges will not be reissued if lost or forgotten at your hotel.
- There is no travel support desk.
- Unauthorized recording of sound and/or video of any sessions is prohibited.
- Participants are kindly requested to keep their mobile phones switched off while in the session rooms.
- It is rainy season in Malang and Batu City. You may bring umbrella handy.

**Opening ceremony/ Keynote Lecturer**

- To be held at the time, date and venue shown below:  
08.30 – 09.30, Wednesday, 19<sup>th</sup> October  
Panderman room, Royal Orchid Garden Hotel
- Please complete registration, and attach your Name Badge before entering the venue.

**Welcome Party**

To be held at the time, date and venue shown below:  
15:00-22:00, Wednesday, 19<sup>th</sup> October  
Faculty of Animal Husbandry, Brawijaya University

**Closing ceremony/ Farewell party and Dinner**

To be held at the time, date and venue shown below:  
18.00 – 21.00, Thursday, 20<sup>th</sup> October  
Singhasari restaurant, Royal Orchid Garden Hotel

**PRORGAM DETAIL**

**The 3<sup>rd</sup> Animal Production International Seminar &  
The 3<sup>rd</sup> ASEAN Regional Conference on Animal Production  
(3<sup>rd</sup> APIS - 3<sup>rd</sup> ARCAP 2016)  
Batu, 19-21 October 2016**

<b>Wednesday, 19 October 2016</b>			
<b>Time</b>	<b>Program</b>	<b>Person In Charge</b>	<b>Venue</b>
<b>07.00-08.30</b>	<b>Registration</b>	<b>OC</b>	<b>Panderman Room</b>
<b>08.30-09.30</b>	<b>Opening Ceremony</b> <ul style="list-style-type: none"> <li>• Welcome Traditional Dance</li> <li>• Report by Chairman of Organizing Committee</li> <li>• Opening Remarks by Dean Fac. Anim. Husbandry . Brawijaya University</li> <li>• Opening Remarks by Rector, Brawijaya University</li> <li>• Dance Performance</li> <li>• Pray for the success of the seminar</li> </ul>	<b>MC</b> OC Dr.Marjuki  Prof.Dr.Sc.Agr. Suyadi Prof.Dr. Mochammad Bisri  OC OC	<b>Panderman Room</b>
<b>09.30-10.00</b>	<b>Coffee Break</b>	<b>OC</b>	<b>Panderman Lobby</b>
<b>10.00-10.40</b>	<b>Keynote Speakers Presentation 1</b> <ol style="list-style-type: none"> <li>1. Review of Researches for Development of Sustainable Livestock Production <i>(Prof. (Emeritus) Liang Chou Hsia, Ph.D.)</i></li> <li>2. Breeding Program of Local and Imported Beef/Dairy Cattle Breed for Development of Sustainable Livestock Production <i>(Prof.Dr. A.K.Thiruvankadan, Ph.D.)</i></li> </ol>	<b>Moderator</b> Dr.Bambang Ali N.	<b>Panderman Room</b>
<b>10.40-11.20</b>	<b>Keynote Speakers Presentation 2</b> <ol style="list-style-type: none"> <li>1. Current Analysis on Beef Self Sufficiency Program in Indonesia <i>(Prof.Dr.Ir. Hendrawan Soetanto)</i></li> <li>2. Current Development Trends in Global Broiler Production <i>(Prof. Dr. Yusuf L. Henuk)</i></li> </ol>	<b>Moderator</b> Prof.Dr. A.K.Thiruvankadan, Ph.D.	<b>Panderman Room</b>
<b>11.20-12.00</b>	<b>Keynote Speakers Presentation 3</b> <ol style="list-style-type: none"> <li>1. Feeding Management of Ruminant Animals to Reduce Their Contribution for Gas Emission <i>(Assoc.Prof. Anjas Asmara Samsudin, DVM,Ph.D.)</i></li> <li>2. Manipulation of Ruminant Fermentation and Methane Mitigation by Feeding Management: Strategic Success Keys for Smallholder Dairy Farm with Environmentally Friendly <i>(Assoc. Prof. Suntorn Wittayakun, Ph.D.)</i></li> </ol>	<b>Moderator</b> Prof.Dr. Hendrawan Soetanto	<b>Panderman Room</b>
<b>12.00-13.00</b>	<b>Lunch Break</b>	<b>OC</b>	<b>Orchid Hotel Restaurant</b>

<b>13.00-14.00</b>	<b>Parallel Oral Presentation Session 1</b> Feeds and nutrition Feeds and nutrition Genetic, breeding, and conservation Livestock production systems Socio-economic and agribusiness	<b>Scientific Committee</b>	<b>Orchid Hotel</b> Panderman Room 1 Panderman Room 2 Semeru Room Anjasmoro Room Welirang Room
<b>14.00-15.00</b>	<b>Parallel Oral Presentation Session 2</b> Feeds and nutrition Feeds and nutrition Socio-economic and agribusiness Reproduction Products processing and food safety	<b>Scientific Committee</b>	<b>Orchid Hotel</b> Panderman Room 1 Panderman Room 2 Semeru Room Anjasmoro Room Welirang Room
<b>15.00-22.00</b>	<b>Welcome Party and Dinner</b> Trip to Venue (Brawijaya University Campus) Reog performance Welcome speech Welcome dance Welcome party and Dinner Return to Hotel	<b>OC</b>	<b>Faculty of Animal Husbandry, Brawijaya Univ. Campus</b>

<b>Thursday, 20 October 2016</b>			
<b>Time</b>	<b>Program</b>	<b>Person In Charge</b>	<b>Venue</b>
<b>08.00-16.00</b>	<b>Field Trip:</b> <b>Group 1.</b> Livestock Training Center-Songgoriti, Pujon Dairy Cooperatives- milk collecting/processing plant and farms, Lunch, Eco Green park.  <b>Group 2.</b> Pujon dairy cooperatives- milk collecting/processing plant and farms, Livestock Training Center-Songgoriti,Lunch, Eco Green Park.	<b>OC</b>	<b>Orchid Hotel</b>
<b>18.00-21.00</b>	<b>Farewell Party and Dinner</b>	<b>OC</b>	<b>Orchid Hotel Restaurant</b>

<b>Friday, 21 October 2016</b>			
<b>Time</b>	<b>Program</b>	<b>Person In Charge</b>	<b>Venue</b>
<b>08.00-09.30</b>	<b>Oral Parallel Presentation Session 3</b> Feed and Nutrition Feed and Nutrition genetic, breeding, and conservation	<b>Scientific Committee</b>	<b>Orchid Hotel</b> Panderman Room 1 Panderman Room 2 Semeru Room

	Livestock production systems Veterinary and health care		Anjasmoro Room Welirang Room
<b>09.30-10.00</b>	<b>Coffee Break and Poster Presentation</b>		<b>Panderman Hall</b>
<b>10.00-11.00</b>	<b>Oral Parallel Presentation Session 4</b>  Feed and Nutrition  Feed and Nutrition  Reproduction Livestock production systems Socio-economic and agribusiness	<b>Scientific Committee</b>	<b>Orchid Hotel</b>  Panderman Room 1 Panderman Room 2 Semeru Room Anjasmoro Room Welirang Room
<b>11.00-12.30</b>	<b>Lunch Break</b>	<b>OC</b>	<b>Orchid Hotel Restaurant</b>
<b>12.30-14.00</b>	<b>Oral Parallel Presentation Session 5</b>  Feed and Nutrition  Feed and Nutrition  Feed and Nutrition Livestock production systems  Socio Economics and Others	<b>Scientific Committee</b>	<b>Orchid Hotel</b>  Panderman Room 1 Panderman Room 2 Semeru Room Anjasmoro Room Welirang Room
<b>15.30-15.45</b>	<b>Coffee Break</b>		<b>Panderman Hall</b>
<b>15.45-16.30</b>	<b>Young Scientist Awards and Closing Session</b>	<b>Scientific Committee</b>	<b>Orchid Hotel</b>

## Badges

Wear your meeting badge. It is required for admission to breaks and meals.

## Photo Policy

Capturing Power Point images during oral presentations or image of poster presentations via photography with camera or cell phones is strictly prohibited.

## Chairs

- Please be seated of your session room at least 10 minutes prior to the start of your session
- Their is a time keeper to indicate each speaker's allotted time.
- Please manage the seassion time not to delay the schedule.

## Oral Presenters

### Keynote and Oral Sessions :

1. Presentation time for:
  - 1.1 **Keynote** speaker is 15 minutes followed by 5 minutes discussion.
  - 1.2 Allocated time for each **Oral Speaker** is 8 minutes, discussion and questions are 2 minutes and all must be in English
2. Volunteer worker in the presentation hall is given a time and bell to ensure the session progressing on time.

### Oral Presentation Session:

1. Presentation time for each speaker is 8 minutes followed by 2 minutes discussion.
2. Volunteer worker in the presentation hall is given a timer and bell to ensure the session progressing on time.
3. If the presenter is absent, please keep his or her presentation session empty. We do not change the program and bring other presentations forward. This is to ensure those participants from other sessions will be able to join the session on time.

### Presentation guideline:

1. All Power Point presentations will be loaded in advance at least **45 minutes** before the start of each session by APIS & ARCAP Secretariat team.
2. If combining video films with Power Point, please make sure to check it in the session hall where your lecture is taking place during a coffee or lunch break prior to your session, at least **45 minutes** before the start of the session. However, no audio file to be operated.
3. No presentation will be accepted in the session room or loaded while the session is in progress or between presentations. The use of personal computers for presentations in the session rooms will not be permitted. If you cannot follow these guidelines you should plan to present without visual tools.
4. We will accept computer-based PowerPoint presentations. Slide/ Overhead projectors will NOT be available

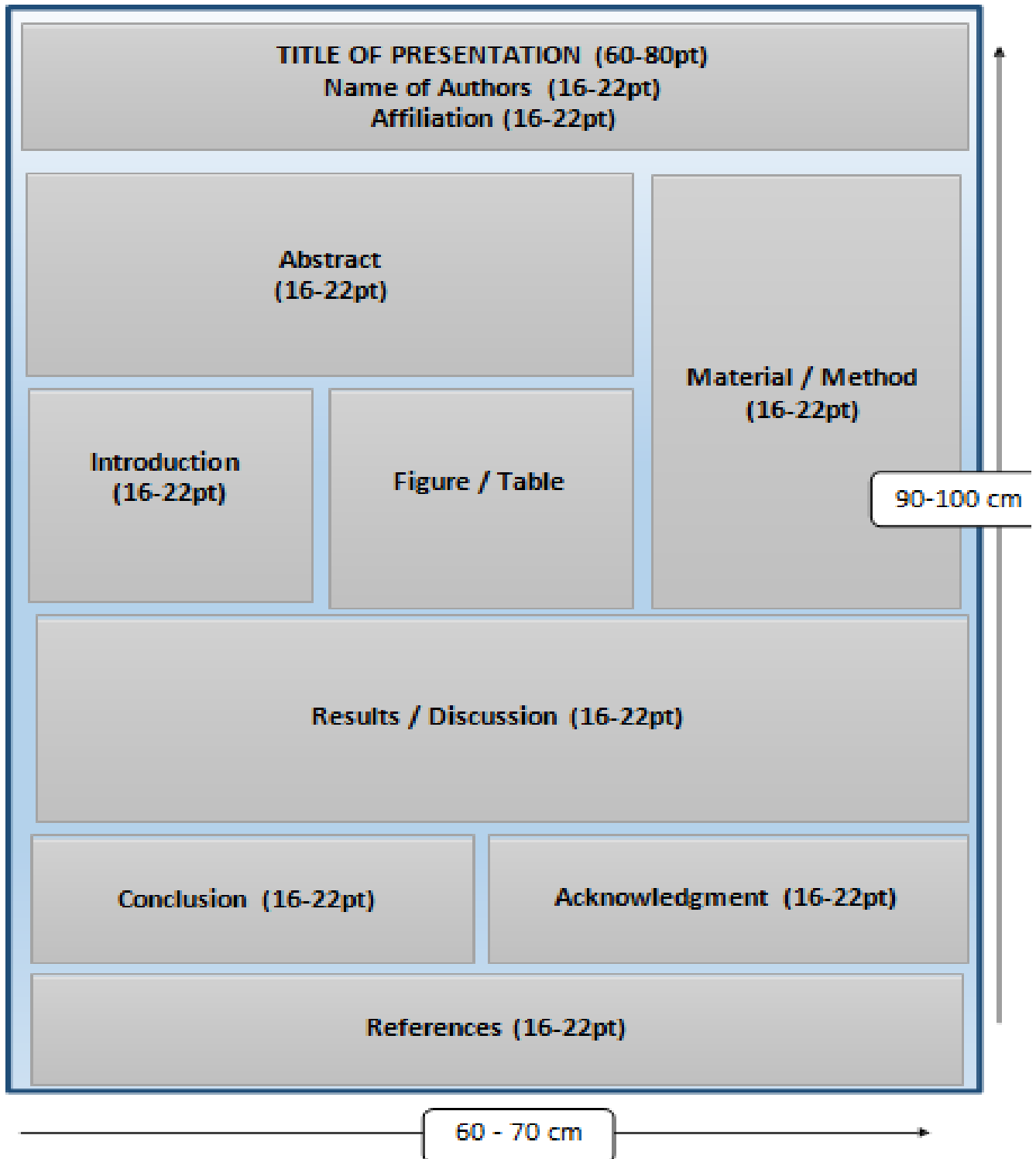
5. Please bring your presentations on a USB Flash Memory Stick. Please do not bring your own computer.
6. Presentation must be made in PowerPoint readable in Windows.
7. The computers provided for sessions will be running by Windows 7 or 8 operation system with the following application software installed. Power Point 2003, 2007, 2010 and 2013.
8. Use the above operating systems English fonts only.
9. If your presentation data is linked to other file (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.
10. The resolution of the LCD projector for presentation is XGA (1024 x 768)
11. Please note that MOs, floppy disks, and CD RWs cannot be accepted
12. Please drop off your data at the PC of secretariat team by the appointed time.
13. All presenters are responsibility for checking virus at the PC of secretariat team.
14. The secretariat team is responsible for discarding all copies of any data after the session.

## **Poster Presenters**

1. Please find your poster board number at the list of poster presentation in the program book, and check the times for mounting, viewing, and removal of your poster.
2. Poster presentation should be mounted during 09:30-10:00 a.m. on October 21<sup>th</sup>, and removed after 17:00 p.m. on October 21.
3. The participants are **REQUIRED** to be presented by their poster during the sessions.
4. Failure to display an accepted poster during the poster time at the meeting may result in the rejection and removal of abstract and pull paper from the electronic version of the conference proceedings.
5. The dimensions of the poster board are: **60-70 cm WIDE x 90-100 cm HEIGHT (see below image)**
6. Allocate the top of the poster for the title and authors as stated on the submitted abstract.



GUIDELINE FOR POSTER PRESENTATION CONFERENCE  
(PORTRAIT ORIENTATION) A1 PAPER



# Oral Presentation Program

**Day1: Wednesday, 19 October [Orchid Hotels]**

## Oral Presentation 1 Focus Session: Feed and Nutrition(1)

**Wednesday, 19 October 13:00-14:00 Room: Panderman 1**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
13.00-13.10	Smallholder dairy cattle farmer capacity in providing feeds and nutrient in several population densities of villages of Sleman Regency, DIY Province – Indonesia Permana I. G., Zahera R., Toharmat T. and Despal	Permana I. G (Moderator 2)	FN – 392
13.10-13.20	Nutritional properties of several seaweeds species for dairy cattle Despal, Hasri N. and Permana I. G.	Despal	FN – 393
13.20-13.30	Inclusion of various levels of peanut hay (rendeng) in the rabbit diet Tuti Haryati, Bram Brahmantiyo, Bayu Dewantoro P. Soewandi, and Yono C. Raharjo	Tuti Haryati	FN – 327
13.30-13.40	The use of corn fodder for rabbit production Yono C. Raharjo, S. Rahayu, Bayu Dewantoro P. Soewandi, and Tuti Haryati	Yono C. Raharjo(Moderator 1)	FN – 328
13.40-13.50	Effect of mixture of manure and jackfruit peel fermented by <i>Aspergillus oryzae</i> on in vitro gas production parameters <sup>1</sup> Mashudi, Siti Chuzaemi and Eka Yunianti	Mashudi	FN – 399
13.50-14.00	Changes in nutrition and fibre silage water hyacinth ( <i>Eichornia crassipes</i> ) as ruminant feed fermented with several fermentative materials <sup>1</sup> <sup>1</sup> Muhammad Mukhtar	Muhammad Mukhtar	FN – 361

**Oral Presentation 1 Focus Session :Feed and Nutrition (2)**

**Wednesday, 19 October 13:00-14:00 Room: Panderman 2**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
13.00-13.10	Performance of broiler chickens fed diets supplemented with several palm polysaccharides <sup>1</sup> <sup>1</sup> B. Sundu, S. Bahry, and H. B. R. Dien	B. Sundu (Moderator 2)	FN – 374
13.10-13.20	Supplementation of the diets with rich – selenium feedstuffs on the performance of 4 weeks old broiler chickens <sup>1</sup> <sup>1</sup> B. Sundu. A. Adjis and R. Dien	B. Sundu	FN – 369
13.20-13.30	Effects of different combination of water hyacinth (Eichornia crassipes mart) leaves and sapu sapu fish (Hypostomus plecostomus) on growth performances of local ducks in Lombok <sup>1</sup> <sup>1</sup> B. Q. Erni Nurhidayati, Asnawi and Wiryawan, K. G.	B. Q. Erni Nurhidayati	FN – 316
13.30-13.40	Evaluation on the biological effectivity of BS4 enzymes in laying hens diet at commercial farms level <sup>1</sup> <sup>1</sup> Arnold P. Sinurat, Broto Wibowo, Tresnawati Purwadaria, and Tuti Haryati	Arnold P. Sinurat (Moderator 1)	FN – 317
13.40-13.50	The effect of Type of Microbes and Humic Acid Does to Improve The Quality and Nutriet Contents of Palm Oil Sludge <sup>1</sup> <sup>1</sup> Mirawati, Ade Djulardi and Gita Ciptaan	Mirawati	FN – 324
13.50-14.00	Effect of probiotic supplementation in feed on meat cholesterol content and intestinal microflora of broiler <sup>1</sup> <sup>1</sup> Ilham Ardiansah, Syaiful Haq Baderuddin, Kholifatus Sholiha, Andini Nur Izza, Ratna Mustika Pratiwi, Zeta Rivlinia Sari and Osfar Sjojfan	Ilham Ardiansah	FN – 396

**Oral Presentation 1 Focus Session :Genetic Breeding and Conservation**

Wednesday, 19 October 13:00-14:00 Room: Semeru

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
13.00-13.10	The qualitative and quantitative characteristics identification of bali cows having different coat color in Kupang, East Nusa Tenggara, Indonesia <sup>1</sup> <sup>1</sup> Arnold. Christian Tabun, Ferdinan Suharjon Suek, Bernadus Ndoen, Thomas Lapenangga, Cardial Leo Penu, and Johanis Jermias	Arnold. Christian Tabun	GB – 106
13.10-13.20	Mitochondrial d-loop nucleotide sequence of indonesian gayo buffalo: variation and phylogeny studies 1 1 Eka Meutia Sari, Mohd. Agus Nashri Abdullah, M. Yunus, Nuzul Asmilia, and Eryk Andreas	Eka Meutia Sari	GB -107
13.20-13.30	Morphology of Indonesian native ducks 1 1 Daniel D. I. Putra, Dyah Maharani, Dwi N. H. Hariyono, Jafendi H. P. Sidadolog, and Jun Heon Lee	Daniel ( Moderator 1)	GB -109
13.30-13.40	Variation of Quantitative Traits of Kamang Duck as Local Genetic Resources in Kamang Regency West Sumatera <sup>1</sup> <sup>1</sup> Firda Arlina, Sabrina, Husmaini, and Franky	Firda Arlina( Moderator2)	GB -111
13.40-13.50	Flock Composition, Effective Population Size, Actual Population Size And Rate of Inbreeding of Kamang Duck in Kamang Magek Regency Agam District <sup>1</sup> <sup>1</sup> Sabrina, Firda Arlina, Husmaini, and Guntur Eka Putra	Sabrina Amini	GB -112
13.50-14.00	Polimorphism of Silkworms Bombyx mori of two Breeding Centers (Soppeng and Temanggung) in Indonesia <sup>1</sup> <sup>1</sup> Nur Cholis	Nur Cholis	GB – 110

**Oral Presentation 1 Focus Session : Livestock Production Systems**

Wednesday, 19 October 13:00-14:00 Room: Anjasmoro

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
13.00-13.10	Chickens Population and Production and Their Contribution to Human Population in Indonesia <sup>1</sup> <sup>1</sup> Yusuf L. Henuk, D. Bakti, Rosmayati, G. A. M. K. Dewi, S. Y. F. G. Dillak	Arnold. Christian Tabun	LP - 232
13.10-13.20	Prospects of broiler Industry in Indonesia <sup>1</sup> <sup>1</sup> V. J. Ballo, M. Sinlae, J. F. Theedens, S. T. Temu, and Y. L. Henuk	V. J. Ballo	LP - 233
13.20-13.30	Structural adaptation and concentrating capacity of ruminant kidney: buffalo, cattle and goat <sup>1</sup> <sup>1</sup> Djoni Prawira Rahardja, Tri Widyo Utomo and H. Sonjaya	Djoni Prawira Rahardja	LP – 208
13.30-13.40	Doe productivity of etawah grade does based on hair color differences <sup>1</sup> <sup>1</sup> I Gede Suparta Budisatria, Panjono, and Dyah maharani	I Gede Suparta Budisatria	LP – 207
13.40-13.50	The effect of duration of photoperiod and light intensity toward first age of laying, feed consumption, daily egg production, and feed conversion <sup>1</sup> <sup>1</sup> Prayogi H. S., Sudjarwo E., and Putra A. P. P.	Heni Setyo Paryogi (Moderator 1)	LP – 229
13.50-14.00	Integrated rice-duck farming system in asia <sup>1</sup> <sup>1</sup> Y. L. Henuk, S. P. Ginting, A. R. Hasyim, Muslim, T. J. Adawiyah, M. Firdaus, and Arwinsyah	Y. L. Henuk	LP – 212

**Oral Presentation 1 Focus Session : Socio-economics and agribusiness**

Wednesday, 19 October 13:00-14:00 Room: Welirang

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
13.00-13.10	An assessment of Indonesia's beef supply chain <sup>1</sup> <sup>1</sup> Bambang Ali Nugroho	Bambang Ali Nugroho(MODERATOR 2)	SE – 718
13.10-13.20	Feasibility of sugarcane - cattle integration model in supporting farmers self sufficiency and prosperity in Kerinci Regency, Province of Jambi, Sumatera <sup>1</sup> <sup>1</sup> Firmansyah, Afriani H. and Rahmi Dianita	Rahmi Dianita	SE – 701
13.20-13.30	Profile analysis and application of technology in the farmer's group of ettawa crossbred goat in Yogyakarta Indonesia <sup>1</sup> <sup>1</sup> Tri Anggraeni Kusumastuti and Sigit Bintara	Tri Anggraeni Kusumastuti	SE – 702
13.30-13.40	Profile of farmers' groups and its affectivity in supporting agribusiness on the smallholder beef cattle in Yogyakarta Province, Indonesia <sup>1</sup> <sup>1</sup> Rini widiaty, Trisakti Haryadi, and Tri Anggraeni Kusumastuti	Rini widiaty	SE – 703
13.40-13.50	Socioeconomic and productive performance of smallholder dairy farm in Lampung Province, Northern Thailand <sup>1</sup> <sup>1</sup> Suntorn Wittayakun	Assoc.Prof.Dr. Suntorn Wittayakun(MODERATOR 1)	SE – 704
13.50-14.00	Analysis of maize feed industry : a supply chain perspective <sup>1</sup> <sup>1</sup> James Hellyward, Jafrinur, Nurhayati, Fitriani, and Elfi Rahmi	James Hellyward	SE – 729

**Oral Presentation 2 Focus Session :Feed and Nutrition (1)**

Wednesday, 19 October 14:00-15:00 Room: Panderman 1

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
14.00-14.10	Production and milk composition of crossbred etawah goats fed on basal diet containing different levels of sesbania ( <i>Sesbania grandiflora</i> ) leaves <sup>1</sup> <sup>1</sup> A R. S. Asih, K G. Wiryawan, I. N. Sadia, and Kertanegara	A. R. S. Asih (MODERATOR 2)	FN – 367
14.10-14.20	The fermentation of bagase with fungi <i>Ganoderma lucidum</i> and its ligninolytic enzyme activity <sup>1</sup> <sup>1</sup> Fauzia Agustin and Elihasridas	Fauzia Agustin	FN – 370
14.20-14.30	Encapsulated biomineral supplementation in dairy cattle ration on in vitro fermentability and digestibility <sup>1</sup> <sup>1</sup> Anita S. Tjakradidjaja, Ajeng Puspandari, Suryahadi, B. Bakrie and Dewi A. Astuti	Anita S. Tjakradijaja	FN – 371
14.30-14.40	Effect of packaging medium on survival of napier grass stem cutting <sup>1</sup> <sup>1</sup> J. Shokri, H. Yaakub, and N. H. Hussein	J. Shokri	FN – 372
14.40-14.50	Manihot utilisima leaves supplement in cow dietary of rice straw ammoniation basis and synchronize in releasing N-protein and energy in the rumen <sup>1</sup> <sup>1</sup> Hermon and Jaswandi	Hermon	FN – 383
14.50-15.00	Effects of Rumen Mechanical Stimulating Brush Administration on eating behavior, dry matter intake and dry matter digestibility of Brahman Cross Steers Fed with Low Forage Diet <sup>1</sup> <sup>1</sup> Sari Nurmeiliasari, Rudy Priyanto, and Dewi Apri Astuti	sari nurmeiliasari (MODERATOR1)	LP – 215

**Oral Presentation2 Focus Session :Feed and Nutrition (2)****Wednesday, 19 October 14:00-15:00 Room: Panderman 2**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
14.00-14.10	Effect of Piper retrofractum as a phytogetic feed additive for broiler performance <sup>1</sup> <sup>1</sup> Ninasari R. A., Mutia R., and Sukria H. A.	Rahayu Ambarwati Ninasari (MODERATOR2)	FN – 373
14.10-14.20	Production performance and egg quality of laying hens on silage juice addition <sup>1</sup> <sup>1</sup> R.A.Rosa, M. Ridla, A. Setiyono, N. Fauziah, W. Hermana and Nahrowi	Rahayu Asmadini Rosa	FN – 375
14.20-14.30	Digestibility evaluation of microparticle protein derived from fish meal and soybean meal in broiler chicken <sup>1</sup> <sup>1</sup> Nyoman Suthama and Pratama Jujur Wibawa	Nyoman Suthama	FN – 376
14.30-14.40	Piper betle Leaf Infuse Supplementation as Herbal Antibiotic to Reduce Salmonella sp. in Small Intestine of Quail ( <i>Cortunix cortunix japonica</i> ) <sup>1</sup> <sup>1</sup> Widjaya F.E., Y. Retnani, and W. Hermana	Fensa Eka Widjaya	FN – 377
14.40-14.50	The effect of addition mannase enzyme in diet on broiler production performances <sup>1</sup> <sup>1</sup> Eko Widodo, Osfar Sjojfan, and Hesdyana Novita	Eko Widodo (MODERATOR1)	FN – 381
14.50-15.00	Broiler chickens performance as affected by animal fat and plant oil under hot arid conditions of Sudan <sup>1</sup> <sup>1</sup> Asma H. M. Hamed , N. A. Musharaf and Amani A. B. Osman	Asma Himmeh Mohammed	FN – 344



**Oral Presentation2 Focus Session : Socio-economics and agribusiness**

Wednesday, 19 October 14:00-15:00 Room: Semeru

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
14.00-14.10	Development of livestock agroindustry: increasing revenue economic and employment opportunities to local society <sup>1</sup> <sup>1</sup> Sitti Zubaidah	Sitti Zubaidah (Moderator 2)	SE – 707
14.10-14.20	Urban community program of rabbit raising based on eco-friendly <sup>1</sup> <sup>1</sup> Mudawamah	Mudawamah	SE – 714
14.20-14.30	Farmers' adoption to pig intensive keeping system in Taebenu Sub District, West Timor, Indonesia <sup>1</sup> <sup>1</sup> Johanis A. Jermias, Cardial Leo Penu , Defrys R. Tulle, I Gusti Ngurah Jelantik, Devi A. J. Ndolu, Sondang P. P. Leoanak	Johanis A. Jermias	SE – 709
14.30-14.40	The empowerment of Rabbit Breeders in Lang-lang Village, Singosari Districts, Malang City, East Java Province, Indonesia <sup>1</sup> <sup>1</sup> Kusumastuti A. E., Azizah S., and Nugroho E.	Anie Eka Kusumastuti (Moderator 1)	SE – 720
14.40-14.50	Evaluation of productivity indicators to propose broiler performance index for assessment of broiler operations <sup>1</sup> <sup>1</sup> Jayaweera B. P. A.	Jayaweera B.P.A	SE – 713
14.50-15.00	Fresh Milk Quality and Information Availability on Local Stage in Malang Area East Java, Indonesia <sup>1</sup> <sup>1</sup> Firmansyah Tri Saputra	Firmansyah Tri Saputra	SE – 727

**Oral Presentation2 Focus Session :Reproduction****Wednesday, 19 October 14:00-15:00 Room: Anjasmoro**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
14.00-14.10	Sperm quality of ongole crossbred cattle on egg yolk cauda epididymal extender during cooling process in straw <sup>1</sup> <sup>1</sup> Aulia Puspita Anugra Yekti, Enike Dwi Kusumawati, Nislaus Sholikah, Muchamad Luthfi, Lukman Affandhy, Dicky Pamungkas, Kuswati, Aswah Ridhowi, Nurul Isnaini, and Trinil Susilawati	Aulia Puspita Anugra Yekti	RP – 401
14.10-14.20	Semen characteristics and sperm recovery rate of Aceh bull frozen semen <sup>1</sup> <sup>1</sup> Wilmietje Marlene Nalley, Hensieriana L.L Belli, Thomas Mata Hine, Iis Arifiantini, and Eros Sukmawati	Wielmientje Marlene Nalley	RP – 405
14.20-14.30	Post-thawed semen quality of West Java local ram at different level of gliserol <sup>1</sup> <sup>1</sup> Nurcholidah Solihati, Siti Darodjah Rasad, Rangga Setiawan, and Santi Nurjanah	Nurcholidah Solihati	RP – 414
14.30-14.40	Effect equilibration time in the process of freezing the quality of semen Wagyu bull using diluent (R) Andromed <sup>1</sup> <sup>1</sup> Trinil Susilawati, Hirzi Hanifi, and Moh. Nur Ihsan	Trinil Susilawati (moderator1)	RP – 417
14.40-14.50	The Effect of Mangosteen (Garcinia mangostana) Peel Filtrate Supplementation in Skim Milk based Diluent on Limousin Culled Semen Quality during Cooling Process <sup>1</sup> <sup>1</sup> Nurul Isnaini and Aulia Puspita Anugra Yekti	Nurul Isnaini (Moderator 2)	RP – 423
14.50-15.00	The acceptability of limousine bull raw semen for frozen semen production <sup>1</sup> <sup>1</sup> Iis Arifiantini, Meta Yuniar, Wilmintje Marlene Nalley, and Eros Sukmawati	Iis Arifiantini	RP – 406

**Oral Presentation2 Focus Session :Product Processing and Food Safety**

Wednesday, 19 October 14:00-15:10 Room: Welirang

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
14.00-14.10	Meta-analysis of nutritional quality comparison between organic and conventional dairy products <sup>1</sup> <sup>1</sup> Eny Palupi , Angelika Ploeger , Johannes Kahl , and Anuraga Jayanegara	Anuraga Jayanegara (Moderator 2)	PP – 601
14.10-14.20	Physical characteristics and mineral compositionof bone meals produced from different body parts of cattle bones by open-air burning and limed-water cooking and limed-water cooking <sup>1</sup> <sup>1</sup> Khalil, Reswati, Ferawati, Y. F. Kurnia, and F. Agustin	Khalil	PP – 603
14.20-14.30	Effect of storage time and citric acid addition on functional properties of arabian chicken egg white <sup>1</sup> <sup>1</sup> Imam Thohari, Muji Lestari, and Firman Jaya	Imam Thohari	PP – 604
14.30-14.40	The Physical quality and organoleptic properties of beef meatbalss in Malang, East Java, Indonesia <sup>1</sup> <sup>1</sup> Rosyidi D., A. S. Widiati, E. S. Widyastuty, and Agustina D. P.	Djalal Rosyidi (Moderator 1)	PP – 607
14.40-14.50	Application of porang flour for fat replacer in reduced fat mayonnaise <sup>1</sup> <sup>1</sup> Herly Evanuarini, Nurliyani, Indratiningsih	Herly Evanuarini	PP – 608
14.50-15.00	Effect of canna starch ( <i>Canna edulis</i> Ker) during refrigerator storage on syneresis, viscosity, and total plate count of yoghurt drink <sup>1</sup> <sup>1</sup> Lilik Eka Radiati, Imam Thohari and Ahmad Khoirul Umam	Lilik Eka Radiati	PP – 609

# Oral Presentation Program

**Day 3: Friday, 21 October [Orchid Hotels]**

## Oral Presentation 03: Focus Session :Feed and Nutrition(1)

**Friday, 21 October 08:00-09:20 Room: Panderman 1**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
08.00-08.10	Biological status and conservation of anoa ( <i>Bubalus depressicornis</i> ) in tropical forest of North Sulawesi <sup>1</sup> <sup>1</sup> Bernat Tulung, J. F. Umboh, K. Maaruf, A. F. Pendong, and Y. L. R. Tulung	Johnny F. Umboh (MODERATOR 2)	FN – 302
08.10-08.20	The nutritional value evaluation of ammoniated rice straw and fermented sago dregs in complete feed on performances of ongole cross breed cattle. <sup>1</sup> <sup>1</sup> R. A. V. Tuturoong, Y. L. R. Tulung dan A. F. Pendong	Ronny A. V. Tuturoong	FN – 349
08.20-08.30	Potential Source of Feedstuffs From Oil Palm Plantation Areas For Development of Cattle Production in Indonesia <sup>1</sup> <sup>1</sup> D. Bakti, Y. L. Henuk, Rosmayati, E. Purba, D. Siahhan	D. Bakti	FN – 389
08.30-08.40	Methane reduction strategy with fat supplementation for development of sustainable ruminant livestock production <sup>1</sup> <sup>1</sup> Nur Hidayah	Nur Hidayah	FN – 395
08.40-08.50	Study of the effect of fortification of herbals to multinutrient feed block on rumen fermentation and total gas production in vitro <sup>1</sup> <sup>1</sup> Rusmana Wijaya Setia Ningrat, Montersqrit, and Erpomen	Rusmana Wijaya Setia Ningrat	FN – 397
08.50-09.00	Evaluation of Edamame Husk Silage Using In Vitro Gas Production Method <sup>1</sup> <sup>1</sup> Siti Chuzaemi, Mashudi, Hendrawan Soetanto, Asri Nurul Huda	Siti Chuzaemi (MODERATOR 1)	FN – 398
09.00-09.10	Development of beef cattle using agricultural by-product in West Java <sup>1</sup> <sup>1</sup> Erika Budiarti Laconi and Sri Mulatsih	Erika Budiarti Laconi	FN – 359
09.10-09.20	Nutritional responses on the hypothalamic-pituitary-ovarian axis on female goats <sup>1</sup> <sup>1</sup> Mashitah Shikh Maidin	Mashitah Shikh Maidin	RP – 407

**Oral Presentation 3 Focus Session :Feed and Nutrition(2)**

**Friday, 21 October 08:00-09:20 Room: Panderman 2**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
08.00-08.10	Performance and egg quality of quail fed marigold flower extract <sup>1</sup> <sup>1</sup> Nuraini, Mirzah and Ade Djulardi	Nuraini	FN – 301
08.10-08.20	Performance of broiler fed diets containing lipid from mealworm ( <i>Tenebrio molitor</i> L.) <sup>1</sup> <sup>1</sup> Intan Permata Sari, Sumiati, and Nahrowi	Intan Permata Sari	FN – 353
08.20-08.30	Propionic acid and enzymes for rabbit feed <sup>1</sup> <sup>1</sup> Susana I. W. Rakhmani	Susana I. W. Rakhmani	FN – 378
08.30-08.40	Enzyme activities and retention of Ca and P of the small intestinal digesta of broilers fed Papua Foxtail Millet containing feed <sup>1</sup> <sup>1</sup> Sisca Tirajoh, Osfar Sjojfan, and Eko Widodo	Eko Widodo (MODERATOR 1)	FN – 379
08.40-08.50	Evaluation of Alabio duck diet ( <i>Anas platyrhynchos borneo</i> ) on the chemical composition of egg yolk at farms in District Alabio South Kalimantan <sup>1</sup> <sup>1</sup> Dwi Margi Suci, S. T. Purnamasari, and Widya Hermana	Dwi Margi Suci	FN – 384
08.50-09.00	Enrichment of Feedstuff With Fermented Soybean Peel to Increase Rabbit Body Weight <sup>1</sup> <sup>1</sup> Sri Minarti, Endang Setyowati, Tatik Wardiyati and Sri Kumalaningsih	Sri Minarti	FN – 385
09.00-09.10	Correlation of NDF (Neutral Detergent Fiber) With In Vitro Gas Production on various legumes <sup>1</sup> <sup>1</sup> Sudarwati,H., I. Subagiyo, A. Irsyammawati, and R. D. Wahyuni	Herni Sudarwati	FN – 386
09.10-09.20	Effectiveness of Feeding Fermented Noni Leaf Meal on Body Resistance, Protein Utilization Efficiency and Performance of Crossbred Kampong Chickens <sup>1</sup> <sup>1</sup> Mahfudz L. D. and N. Suthama	Mahfudz L. D. (Moderator 2)	FN – 387

**Oral Presentation 3: Focus Session: Genetic Breeding and Conservation**

**Friday, 21 October 08:00-09:40 Room: Semeru**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
08.00-08.10	Measurement of reactive oxygen species (ROS) in high and low residual feed intake cattle <sup>1</sup> <sup>1</sup> Nadiatur Akmar Zulkifli, Pitchford, W. S., and Bottema, C. D. K.	Zulkifli N A	GB – 117
08.10-08.20	Prediction of meat quality in bali cattle using ultrasound imaging <sup>1</sup> <sup>1</sup> Jakaria, H. Khasanah, R. Priyanto, M. Baihaqi, M. F. Ulum	Jakaria ( Moderator 2)	GB – 102
08.20-08.30	Diversity Of Insulin Growth Factor-1 (Igf-1) Gene Of Kacang Goat In Kota Gorontalo And Regency Of Bone Bolango Provinceof Gorontalo <sup>1</sup> <sup>1</sup> Fahrul Ilham, Safriyanto Dako, Agus Bahar Rachman, Muhammad Ihsan Andi Dagong, and Lellah Rahim	Fahrul Ilham	GB – 113
08.30-08.40	Identification of single nucleotide polimorphism of melanocortin 4 receptor gene in bligon goat <sup>1</sup> <sup>1</sup> Latifah, Tety Hartatik*, Kustantinah, Dyah Maharani, and Dwi Ahmad Priyadi	Latifah	GB – 105
08.40-08.50	Assosiation of leptin genes polymorphism with average daily gain of local cattle at ciamis west java <sup>1</sup> <sup>1</sup> N. Hilmia, R. R. Noor, C. Sumantri, R. Priyanto, and Gurnadi E.	Nena Hilmia	GB – 108
08.50-09.00	Single nucleotide polymorphism (SNP) using growth hormone (GH) gene of results reciprocal crosses tegal with magelang duck <sup>1</sup> <sup>1</sup> Dattadewi Purwantini, Ismoyowati, Setya Agus Santosa	Dattadewi Purwantini	GB – 103
09.00-09.10	Color variation of Indonesian native ducks <sup>1</sup> <sup>1</sup> Daniel D.I. Putra, Dyah Maharani, Dwi N.H. Hariyono, and Jafendi H.P. Sidadolog	Daniel D Putra	GB – 116
09.10-09.20	Polymorphism of Growth Hormone Gene in Selecting Etawah Crossbred (PE) Goats <sup>1</sup> <sup>1</sup> Tri Eko Susilorini, Kuswati, and S. Maylinda	Tri Eko Susilorini (Moderator 1)	GB – 114
09.20-09.30	Estimation of Heritability and Breeding Value for Birth Weight in Bali Cattle <sup>1</sup> <sup>1</sup> Nurgiartiningsih, V. M. A., Hakim, L., and Budiarto, A.	Nurgiartiningsih, V. M. A.	GB – 115
09.30-09.40	Quality of semen and production frozen semen of different breed and individual beef cattle <sup>1</sup> <sup>1</sup> Trinil Susilawati, Herni Sudarwati, Muhammad Dedi, Mita Ayu Rahmawati, and Aulia Puspita Anugrayekti	Trinil Susilawati	RP – 416

**Oral Presentation 3 Focus Session: Livestock Production**

**Friday, 21 October 08:00-09:20 Room: Anjasmoro**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
08.00-08.10	Physical Carcass Characteristics From Body Composition of Timor Pigs Boar Kept Extensively in the Province of East Nusa Tenggara – Indonesia R. Wea, Y.L. Henuk, T. Barus, S. Sembiring, U.Ginting-Moenthe	R. Wea	LP – 234
08.10-08.20	Effect equilibration time in the process of freezing the quality of semen Wagyu bull using diluent (R) Andromed Trinil Susilawati, Hirzi Hanifi, and Moh. Nur Ihsan	Trinil Susilawati	RP – 417
08.20-08.30	The effect of cherry leaf ( <i>Muntingia calabura</i> ) extract on hatchability and embryo mortality hybrid duck egg Muhammad Ngalaul Huda, Fatikhatul Huda Alkhakim, Galuh Dianita Fitri, Dewi Ambarwati and Heli Tistiana	Muhammad Ngalaul Huda (Moderator 2)	LP – 235
08.30-08.40	Preliminary study on estimation of energy requirement for eating through urinary creatinine in local male sheep <sup>1</sup> <sup>1</sup> Kuntara Fauzan Setyawan, and Agung Purnomoadi	Kuntara Fauzan Setyawan	LP – 236
08.40-08.50	Correlation between crude protein levels in the diets and carcass weight and carcass percentage in thin tailed lambs <sup>1</sup> <sup>1</sup> Rizky Choirunnisa, Ari Prima, Nadhlirotul Lutfi, Mukh Arifin M., Sutaryo, Agung Purnomoadi	Rizky Choirunnisa	LP – 201
08.50-09.00	Correlation between yield grade and rib eye muscle area with different feed level protein of male thin-tailed weaning lamb <sup>1</sup> <sup>1</sup> Agung Purnomoadi and Febrian Rhamadya Dwi Prakoso	Febrian Rhamadya Dwi Prakoso	LP – 202
09.00-09.10	Correlation between fecal rough particle and feed digestibility on thin tail lambs <sup>1</sup> <sup>1</sup> Agung Purnomoadi and Talitha Flora Zahari	Talitha Flora Zahari	LP – 203
09.10-09.20	Phenotypic characteristics of aceh cattle on different sex and age in smallholder farmers <sup>1</sup> <sup>1</sup> Tri Satya Mastuti Widi, Endang Baliarti, Alek Ibrahim, Hendra Koesmara, and I Gede Suparta Budisatria	Tri Satya Mastuti Widi (Moderator 1)	LP – 206

**Oral Presentation 3 Focus Session: Veterinary and Health Care**

**Friday, 21 October 08:00-09:30 Room: Welirang**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
08.00-08.10	Jeringau (Acorus Calamus L) As antibiotic substitute on salmonella typhimurium infected broiler performances <sup>1</sup> <sup>1</sup> Yuli Arif Tribudi, Retno Budi Lestari, Ahmad Thohardi and Yeti Rohayeti	Yuli Arif Tri Budi	VT – 801
08.10-08.20	Prevalence of trematodes infection in sacrificial cattle in some mosques manokwari regency west Papua province Indonesia <sup>1</sup> <sup>1</sup> Purwaningsih , Priyo Sambodo , Noviyanti , Alnita Baaka	Purwaningsih	VT – 803
08.20-08.30	Identification of swine disease, prevention and treatment (a case study in Pinasungkulan village Bitung city) <sup>1</sup> <sup>1</sup> Sri Adiani, Nansi Margret Santa	Sri Adiani	VT – 806
08.30-08.40	Residues of aflatoxins in liver, meat, and egg of alabio duck collected from South kalimantan, Indonesia <sup>1</sup> <sup>1</sup> Ika Sumantri	Ika Sumantri	VT – 807
08.40-08.50	Extraction of bioactive components of cocoa leaves by product and their activation as antioxidants and antimicrobials <sup>1</sup> <sup>1</sup> Chairil Anwar, Asriani Hasanuddin, Marhawati M, Hafsa	Asriani Hasanuddin	VT – 809
08.50-09.00	In vitro antibacterial activity of Black soldier fly (Hermetia illucens) larvae extracts against gram-negative bacteria <sup>1</sup> <sup>1</sup> Harlystiarini, Mutia, R., and Astuti, D. A.	Harlystiarini(MODERATOR 1)	VT – 810
09.00-09.10	Isolation and Characterization of Oviduct Specific Glycoprotein At Goats Oviductal fluid As Candidate Isolate Supplementation of Goats Frozen Semen <sup>1</sup> <sup>1</sup> Herawati, Aulia Firmawati, Herlina Pratiwi, and Nurul Isnaini	Herlina Pratiwi	VT – 811
09.10-09.20	Antibacterial activity of Muntingia Calabura Lam. against some selected bacteria causes mastitis <sup>1</sup> <sup>1</sup> Puguh Surjowardojo, Imam Thohari, Firmansyah, Aswah Ridhowi	Puguh Surjowardojo	VT – 812
09.20-09.30	GST fusion assisted overexpression and purification of recombinant parasite lactate dehydrogenase enzyme in Escherichia coli <sup>1</sup> <sup>1</sup> Ramadhani Haryati, Sulaiman N. depemada dan Muhammad Ali	Ramadhani Haryati	VT – 805



**Oral Presentation 4 Focus Session :Feed and Nutrition(1)**

**Friday, 21 October 09:45-11:05 Room: Panderman 1**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
09.45-09.55	Profile of corn silage juice in different ages and its shelf life <sup>1</sup> <sup>1</sup> Nahrowi Ramli, Muhammad Ridla, Anuraga Jayanegara, Erika Budiarti Laconi, Rahayu Asmadini Rosa, and Ai Karwati	Nahrowi Ramli ( MODERATOR 2)	FN – 303
09.55-10.05	Effect of formic acid on intestinal truly absorbed protein of alfalfa silage <sup>1</sup> <sup>1</sup> Parisa Kheyrandish, M. Danesh Mesgaran and A. Vakili	Parisa Kheyrandish	FN – 307
10.05-10.15	In vitro dry matter degradation kinetics of ruminant feed <sup>1</sup> <sup>1</sup> Rudi, Suryahadi, and Anuraga Jayanegara	Rudi	FN – 309
10.15-10.25	The effects of phenolic compounds in brown propolis extracts on rumen methane production (in vitro) <sup>1</sup> <sup>1</sup> Sh. Ehtesham, A. R. Vakili, and M. Danesh Mesgaran	A. R. Vakili	FN – 310
10.25-10.35	Effect of corn grain physical procesing on in vitro rumen microbial protein production and gas production parameters <sup>1</sup> <sup>1</sup> Behnaz Eyni, Mohsen Danesh Mesgaran, and Alireza Vakili	Behnaz Eyni	FN – 311
10.35-10.45	Effect of peppermint essential oil versus a mixture of formic and propionic acids on corn silage VFA score <sup>1</sup> <sup>1</sup> Mosen Danesh Mesgaran, A. Hodjatpanah-Montazeri, A. Vakili, and M. Tahmasbei	Mosen Danesh Mesgaran	FN – 312
10.45-10.55	Forage production and nutritive value of Clitoria ternatea grown under different maize plant density <sup>1</sup> <sup>1</sup> Jelantik I. G. N, Nikolaus T. T. and Leo Penu C.	I Gusti N. Jelantik	FN – 313
10.55-11.05	Prediction of feed metabolizable energy and metabolizable protein contents from their chemical 1 Constituents <sup>1</sup> <sup>1</sup> Anuraga Jayanegara, Sari P. Dewi, Muhammad Ridla, Erika B. Laconi, and Nahrowi	Anuraga Jayanegara	FN – 314

**Oral Presentation 4 Focus Session: Feed and Nutrition (2)**

**Friday, 21 October 09:45-11:35 Room: Panderman 2**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
09.45-09.55	Nutritional responses on the hypothalamic-pituitary-ovarian axis on female goats <sup>1</sup> <sup>1</sup> Mashitah Shikh Maidin	Mashitah Shikh Maidin (moderator 2)	FN – 320
09.55-10.05	Effects of long transportation preceded by short periods of deprivation on the intake and nutrient digestibility of <i>Bos sondaicus</i> bulls <sup>1</sup> <sup>1</sup> C. L. O. Leo-Penu, D. R. Tulle, J. A. Jermias, U. R. Raya, I. G. N. Jelantik, G. Maranatha, Y. Manggol T. Lapenangga, A. Ch. Tabun, V. Lenda, J. Oematan, and A. J. Parker	C. L. O. Leo-Penu	FN – 321
10.05-10.15	Addition of different species of forages legumes on physical, chemical characteristics and in vitro digestibility of dairy cattle feed pellet <sup>1</sup> <sup>1</sup> Iin Susilawati and Lizah Khairani	Iin Sulistiawati	FN – 365
10.15-10.25	Supplementing <i>Saccharomyces cerevisiae</i> into low quality local-based feeds improves performance and nutrient digestibility of starter local pigs <sup>1</sup> <sup>1</sup> Johanis Ly	Johanis Ly	FN – 322
10.25-10.35	Effects of poultry by product meal based diet on performances of weaning and growing pigs <sup>1</sup> <sup>1</sup> Vidyarathna M. G. S. M. and Jayaweera B. P. A.	Jayaweera B. P. A.	FN – 323
10.35-10.45	Growth performance and carcass composition of lambs consumed complete feed with increasing polyunsaturated fatty acids of sunflower oil <sup>1</sup> <sup>1</sup> Lilis Khotijah, Sailandi R., Ramadani M. F., and Suryati T.	Lilis Khotijah (Moderator1)	FN – 343
10.45-10.55	Blood properties of broiler feed ration containing different Level of pearl grass ( <i>Hedyotis corymbosa</i> (L) Lamk) <sup>1</sup> <sup>1</sup> Nurhayati, Madyawati Latief, and Anie Insulistyowati	Nurhayati	FN – 345
10.55-11.05	Effect supplementation of multi-nutrient feed supplement or urea multi-nutrient molasses block in diet of dairy cattle <sup>1</sup> <sup>1</sup> Suharyono, Yeni Widiawati, and A. Kurniawati	Suharyono	FN – 351

**Oral Presentation 4 Focus Session: Reproduction**

**Friday, 21 October 09:45-11:15 Room: Semeru**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
09.45-09.55	Cleavage rate of sheep oocytes in vitro fertilized by post-thawed epididymal spermatozoa after storage of epididymis at 4° c <sup>1</sup> <sup>1</sup> Ni Wayan Kurniani Karja, Nur'aisyah Amrah Safitri, Anita Hafid, Mokhammad Fahrudin, and Mohamad Agus Setiadi	Ni Wayan Kurniani Karja	RP – 404
09.55-10.05	Effect of Carnitine on Quality of Post Thawed Goat Sperm <sup>1</sup> <sup>1</sup> Sri Wahjuningsih and Muhammad Nur Ihsan	Sri Wahjuningsih	RP – 420
10.05-10.15	Hormone progesteron concentration at the time of Artificial Insemination (AI) on conception rate of beef cows in rural farm in West Sumatera <sup>1</sup> <sup>1</sup> Zaituni Udin, Ferdinal Rahim Hendri, and Yula Yellita	Zaituni Udin	RP – 408
10.15-10.25	Different ratio of omega-3 and omega-6 in total mix ration on blood metabolites, characteristic of estrous and pregnancy rate of ewes <sup>1</sup> <sup>1</sup> Yusti Pujiawati, Asep Sudarman, and Lilis Khotijah	Yusti Pujiawati	RP – 411
10.25-10.35	The comparison of estrus between natural and synchronized PGF2α based on clinical sign and vaginal cytology in Ettawa grade <sup>1</sup> <sup>1</sup> Tuty Laswardi Yusuf and Azmi Firman Binangkit	Tuti Laswardi Yusuf (Moderator 2)	RP – 412
10.35-10.45	The oocyte and sperms cryopreservation of local sheep and goat for gene bank in native Indonesian animal <sup>1</sup> G. Ciptadi, S. Rahayu, Fatchiyah, Maidaswar, Sarastina, Nurhayati, S. Wahjuningsih, E. Herwiyanti, Mudawamah and M. N. Ihsan	G. Ciptadi (Moderator1)	RP – 413
10.45-10.55	Motility spermatozoa of bali cattle after given crude tanin supplement <sup>1</sup> <sup>1</sup> Abyadul Fitriyah, Supriyono, Dian Octaviana Said, and Hery Harianto	Abyadul Fitriyah	RP – 418
10.55-11.05	Reproductive performance of female PO and PO x Limousin crossbred cattle in Kepanjen District of Malang Regency <sup>1</sup> <sup>1</sup> Suyadi and N. Nugoho	Suyadi	RP – 421
11.05-11.15	Estrus emerging following laser puncture induction in goats <sup>1</sup> <sup>1</sup> Suyadi and T. E. Susilorini	Suyadi	RP – 422

**Oral Presentation 4 Focus Session: Livestock Production System**

**Friday, 21 October 09:45-11:05 Room: Anjasmoro**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
09.45-09.55	Correlations between crude protein / total digestible nutrients ratio with commercial cuts weight and percentage of thin tailed lambs <sup>1</sup> <sup>1</sup> F. Nabila, A. Prima, N. Luthfi, E. Purbowati, Sutaryo, and A. Purnomoadi	Farah Nabila (MODERATOR 2)	LP – 204
09.55-10.05	Eating time and ruminating in lambs fed at different total digestible nutrients content of feed <sup>1</sup> <sup>1</sup> F. D. Nugroho, A. Prima, N. Luthfi, S. Dartosukarno, and A Purnomoadi	Febrianto Dwi Nugroho	LP – 205
10.05-10.15			
10.15-10.25			
10.25-10.35	Growth performance of pelung sentul kampung meat type chicken crossing on age 0-10 weeks <sup>1</sup> <sup>1</sup> Darwati S., Hasyim A. R., Rukmiasih, and Prabowo, S.	Darwati	LP – 223
10.35-10.45	Physiological Responses and Milk Qualities of Holstein Friesian During Dry Season at High Altitude <sup>1</sup> <sup>1</sup> E. Mariana, C. Sumantri, D. A. A. Astuti, A. Anggraeni, A. Gunawan, and N. Q. Agustin	Elmy Mariana (MODERATOR 1)	LP – 230
10.45-10.55	Effects of rumen mechanical stimulating brush administration on eating behavior and dry matter digestibility of brahman cross steers fed with low forage diet <sup>1</sup> <sup>1</sup> Sari Nurmeiliasari, Rudy Priyanto, and Dewi Apri Astuti	Sari Nurmeiliasari	LP – 215
10.55-11.05	The study on the use of rough fecal particle proportion to estimate feed digestibility on post-weaned lambs <sup>1</sup> T. F. Zahari, A. Prima, N. Luthfi, S. Dartosukarno, and A. Purnomoadi	Talitha Flora Zahari	LP – 217

**Oral Presentation 4 Focus Season : Socio-Economic and Agribusiness**

**Friday, 21 October 09:45-11:35 Room: Welirang**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
09.45-09.55	Business characteristic of salted egg in the agro industrial center, Brebes, Central Java <sup>1</sup> <sup>1</sup> W. Sumekar, A. N. Al-Baari and E. Kurnianto	Dr. Ir. Wulan Sumekar, MS (MODERATOR 2)	SE – 717
09.55-10.05	Application of science and technology through making compost fertilizer for group members of pig farming <sup>1</sup> <sup>1</sup> A.H.S Salendu, F.H. Elly, F.S.G. Oley, and R.E.M.F. Osak	Artise H. S. Salendu	SE – 726
10.05-10.15	Impact on capital assistance group revenues pig farm "Maesaan" Pinasungkulan Bitung City <sup>1</sup> <sup>1</sup> Lidya Siulce Kalangi and Stanly O. B. Lombogia	Lidya Siulce	SE – 716
10.15-10.25	Empowerment for farmers group of cattle farming in the Tonsewer Village <sup>1</sup> <sup>1</sup> Anneke. K. Rintjap, Fietje S. Oley, J.K.J. Kalangi	Fietje Sophie Greta Oley	SE – 719
10.25-10.35	Productivity of pigs and contribution of pig farming on household income in Pinasungkulan Village Bitung City <sup>1</sup> <sup>1</sup> Nansi Margret Santa and Ingriet D. R. Lumenta	Nansi Margret Santa	SE – 712
10.35-10.45	Introduction of feed technology for development of cattle in North Bolaang Mongondow <sup>1</sup> <sup>1</sup> M. L. Rundengan, S.P. Pangemanan, J.O. Rawis and F.H. Elly	M L. Rundengan	SE – 721
10.45-10.55	Fresh beef demand elasticity among households in Malang city <sup>1</sup> <sup>1</sup> Hari Dwi Utami, Febri Velindria Susanti, and Ainun Pizar Seruni	Hari Dwi Utami	SE – 722
10.55-11.05	Analysis of the self ability level of farmers on the integration system of cattle and oil palm plantations in Jambi Province <sup>1</sup> <sup>1</sup> Nahri Idris, Afriani H., and Fatati	Nahri Idris	SE – 708

**Oral Presentation 5 Focus Session: Feed and Nutrition (1)**

**Friday, 21 October 12:30-14:40 Room: Panderman 1**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
12.30-12.40	Feed consumption and dry matter digestibility of feed containing different protein levels in thin tailed lambs fattened after weaning <sup>1</sup> <sup>1</sup> Ari Prima, Edy Rianto, and Agung Purnomoadi	Ari Prima	FN – 305
12.40-12.50	Effect of storage time and physical form of diet with formulated from local feed based on nutrient composition of the diets <sup>1</sup> <sup>1</sup> Hafsah, Fatmawati, Sri Sarjuni, and Anantesya Hera Dini	Hafsah (MODERATOR 1)	FN – 390
12.50-13.00	A pathway to sustainable agriculture through protection and propagation of indigenous livestock breeds of pakistan-cholistani cattle as a case study through protection and propagation of indigenous livestock breeds of pakistan-cholistani cattle as a case study <sup>1</sup> <sup>1</sup> Umer Farooq	Umer Farooq	GB – 101
13.00-13.10	Effect of encapsulant materials in encapsulation process of leaf green grass jelly extract ( <i>Cyclea barbata</i> L. Miers) on product microcapsule quality <sup>1</sup> <sup>1</sup> Natsir M. H, R. Rusdianawati, O. Sjojfan and Muharlieni	Muhammad Halim Natsir (MODERATOR2)	FN – 388
13.10-13.20	Nutritive value of various legume tree as protein sources in animal nutrition <sup>1</sup> <sup>1</sup> A. Irsyammawati, I. Subagiyo, H. Sudarwati, and R.D. Wahyuni	Artharini Irsyammawati	FN – 394
13.20-13.30	Enrichment of Feedstuff With Fermented Soybean Peel to Increase Rabbit Body Weight <sup>1</sup> <sup>1</sup> Sri Minarti, Endang Setyowati, Tatik Wardiyati and Sri Kumalaningsih	Sri Minarti	FN – 385
13.30-13.40	Broiler chickens performance as affected by animal fat and plant oil under hot arid conditions of Sudan <sup>1</sup> <sup>1</sup> Asma H. M. Hamed , N. A. Musharaf and Amani A. B. Osman	Asma Himmed Mohammed	FN – 344
13.40-13.50	Calcium and phosphorous absorption of field grass during the dry season at medium altitude in Garut <sup>1</sup> <sup>1</sup> Ana Rochana, Iin Susilawati, Herryawan Kemal Mustafa, Nyimas Popi Indriani, and Budi Ayuningsih	Ana Rochana (MODERATOR 2)	FN – 391
13.50-14.00	Isolation and screening of lactic acid bacteria from dadih for glutamic acid production as precursor of $\gamma$ -Amino Butyric Acid (GABA) induced heat stress in broiler <sup>1</sup> <sup>1</sup> Yetti Marlida, Harnentis, and Nurmiati	Yetti Marlida	FN – 347

14.00- 14.10	The effect of fertilizers on soil characteristics of sand-mining land and nutrients content of sorghum patir 3.7 ( <i>Sorghum bicolor</i> (L) Moench) <sup>1</sup> <sup>1</sup> Apdila Safitri, Dewi Apri Astuti, Panca Dewi M. H. Karti	Apdila Safitri	FN – 357
14.10- 14.20	Arbuscular mycorrhizal fungi and rock phosphate role on plant growth of sorghum ( <i>Sorghum bicolor</i> L.) as a forage <sup>1</sup> <sup>1</sup> Nyimas Popi Indriani, Lizah Khairani, Budi Ayuningsih	Nyimas Popi Indriani	FN – 365
14.20- 14.30	The Potential of Local Feed Sources for Silage Production in Supporting The Cattle Raising Business in East Ranotongkor Village <sup>1</sup> <sup>1</sup> Sintya J.K. Umboh, Helena Dasilva, Hendrik O. Gijoh, and Tilly F.D. Lumy	Sintya J.K. Umboh	FN – 364

**Oral Presentation 5 Focus Session: Feed and Nutrition (2)**

**Friday, 21 October 12:30-14:40 Room: Panderman 2**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
12.30-12.40	Legumes wafer for improvement the post-weaning etawah crossbreed goats performance <sup>1</sup> <sup>1</sup> Brilian Desca Dianingtyas, Yuli Retnani, and Dwierra Evvyernie	Brilian Desca Dianingtyas	FN – 352
12.40-12.50	Utilization of cricket meal in creep feed diet of growing etawah cross breed goats <sup>1</sup> <sup>1</sup> Dewi Apri Astuti, Widya, L. Khotidjah, A. Angraeny, K. Komalasari, and Dewi Apri Astuti	Dewi Apri Astuti	FN – 332
12.50-13.0	Performance of first cutting of Pennisetum purpureun cv. Mott under different level of light and nitrogen fertilizer <sup>1</sup> <sup>1</sup> David A. Kaligis, Selvie D. Anis, Johanis R. Tulung, and Sahrudin Dalie	David A. Kaligis	FN – 360
13.00-13.10	Amino acid characterization of tofu waste fermentation using effective microorganism-4 and Lactobacillus plantarum culture <sup>1</sup> <sup>1</sup> Eka Fitasari and Budi Santosa	Eka Fitasari (MODERATOR 2)	FN – 325
13.10-13.20	In vitro digestibility profiles of cricket meal as protein source in the ration <sup>1</sup> <sup>1</sup> Dewi Apri Astuti, M. Miftakhul Solikhin, and Yuni Cahya Endrawati	Dewi Apri Astuti	FN – 331
13.20-13.30	Production of roughage feed under different drying methods and evaluation of the feeding value <sup>1</sup> <sup>1</sup> Jayaweera B. P. A.	Jayaweera B. P. A.	FN – 333
13.30-13.40	In vitro nutrient digestibility of Chromolaena odorata-based silage treated with Corypha gebanga meal and rumen content <sup>1</sup> <sup>1</sup> Yelly M. Mulik, Muhammad Ridla, Iwan Prihantoro, and Marthen L. Mullik	Yelly M. Mulik	FN – 335
13.40-13.50	Production, characterization and purification of xylanase from Staphylococcus aureus MBXi-K4 <sup>1</sup> <sup>1</sup> Indah Wijayanti, Maggy T Suhartono, Khaswar Syamsu, and Yulin Lestari	Indah Wijayanti (MODERATOR 1)	FN – 336
13.50-14.00	To estimate intestinal truly absorbed protein of alfalfa hay and alfalfa silage using new dutch system (DVE/OEB) <sup>1</sup> <sup>1</sup> P. Kheyrandish, M. Danesh Mesgaran and A. Vakili	Parisa Kheyrandish	FN – 340
14.00-14.10	Chitosan protection to saga leaves extract (Abrus precatorius Linn) and Lingzhi mushroom (Ganoderma lucidum) from rumen microbial degradation <sup>1</sup> <sup>1</sup> Evvyernie D., Sukria H. A., Harlina E., Suningsih N., and Zetira H.	Dwierra Evvyernie	FN – 342
14.10-	Effects of different types of cakes in rations on the	Amani Osman	FN – 348



14.20	performance of culled Cyprus shami does in Half Elgadedda, Kassala State, Sudan <sup>1</sup> <sup>1</sup> Amani A.B. Osman and Mohmmmed E. Elimam		
14.20-14.30	Changes in nutrition and fibre silage water hyacinth ( <i>Eichornia crassipes</i> ) as ruminant feed fermented with several fermentative materials <sup>1</sup> Muhammad Mukhtar	Muhammad Mukhtar	FN – 361
14.30-14.40	Effect of <i>Phanerochaete chrysosporium</i> to enzymatic activity and lignin on fermentation process of cocoa pod ( <i>Theobroma cacao</i> ) <sup>1</sup> <sup>1</sup> Engkus Ainul Yakin and Ali Mursyid Wahyu Mulyono	Engkus Ainul Yakin	FN – 400

**Oral Presentation 5 Focus Session :Feed and Nutrition (3)**

**Friday, 21 October 12:30-13:50 Room: Semeru**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
12.30-12.40	Effect of fish oil and its combination with tomato powder supplementation on laying performance of native chicken <sup>1</sup> <sup>1</sup> Faizal Andri, Aji Sukoco, Taufich Hilman, and Eko Widodo	Faizal Andri	FN – 329
12.40-12.50	Effect of substitution of meat bone meal with protein concentrate of mealworm ( <i>Tenebrio molitor</i> L) on performance of broilers <sup>1</sup> <sup>1</sup> Yuli Purnamawati, Sumiati, and Nahrowi	Yuli Purnamawati	FN – 354
12.50-13.00	Supplementation of Zn and vitamin E on the immune responses and performance of broilers in a tropical environment <sup>1</sup> <sup>1</sup> Febrinita Ulfah, Rita Mutia, Asep Gunawan, and Niken Ulupi	Febrinita Ulfah	FN – 356
13.00-13.10	Supplementation of zinc and vitamin E in the diet on performance and expression of HSP70 gene of broiler in tropical environment <sup>1</sup> <sup>1</sup> Rita Mutia, Sumiati, and Tera Fit Rayani	Rita Mutia	FN – 358
13.10-13.20	Supplementation of phitase and mananase in diet which high fiber and phitat acid on quality of quail eggs <i>Coturnix – coturnik japonica</i> <sup>1</sup> <sup>1</sup> Ilfi Rahmi Putri Syanur, Rita Mutia, and M. Ridla	Ilfi Rahmi Putri Syanur	FN – 362
13.20-13.30	Production performances of broiler chicken fed on diets containing different levels of crab ( <i>Portunuspelagicus</i> ) by- product meal <sup>1</sup> <sup>1</sup> I Ketut Gede Wiryawan, Syamsuhaidi, Kasip, L. M. and Binetra, T. S.	I K. G. Wiryawan	FN – 366
13.30-13.40	Serum lipid profile and egg quality of layer fed boiled tomato waste <sup>1</sup> <sup>1</sup> Maria E. M., Dedek H., Gina A. N, Yose. R., and Ardi	Maria E. M.	FN – 368
13.40-13.50	Optimalisation usage of feed additives on low protein diet for broiler raised in the tropical region <sup>1</sup> <sup>1</sup> St. Y. F. G. Dillak and N. G. A. Mulyantini	N. G. A. Mulyantini	FN – 315

**Oral Presentation 5 Focus Session: Livestock Production System**

**Friday, 21 October 12:30-15:00 Room: Anjasmoro**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
12.30-12.40	Estimating yield grade by using body measurements and body condition score in thin-tailed sheep <sup>1</sup> <sup>1</sup> Ulia Renfelia Baysi, Agung Purnomoadi and Endang Purbowati	Ulia Renfelia Baysi	LP – 218
12.40-12.50	Exploration of fecal physical test to estimate weaning age of kids <sup>1</sup> <sup>1</sup> L. P. Lestari, R. N. Andrian, S. Dartosukarno, A. Purnomoadi	Lujeng Puspita Lestari	LP – 219
12.50-13.00	Lactation Curve Pattern and Milk Production Performance of Crossbred Friesian Holstein in Pasuruan Regency, Indonesia <sup>1</sup> <sup>1</sup> Aswah Ridhowi, Trianti Djoharjoni, Herni Sudarwati, Sucik Maylinda	Aswah Ridhowi	LP – 237
13.00-13.10	Correlation of Protein Level in the Diets on Yield Grade and Rib Eye Muscle Area of Post-Weaning Lamb <sup>1</sup> <sup>1</sup> F. R. D. Prakoso, A. Prima, N. Luthfi, E. Purbowati, S. Dartosukarno, and A. Purnomoadi	Febrian Rhamadya Dwi Prakoso (MODERATOR 2)	LP – 226
13.10-13.20	Effects of different combination of water hyacinth leaves and sapu sapu fish on growth performances of local ducks in lombok <sup>1</sup> <sup>1</sup> BQ Erni Nurhidayati, Asnawi and Wiryawan, K.G.	Baiq Erni	LP – 227
13.20-13.30	Identification of Sonok cattle characteristics as local genetic resources in Madura island <sup>1</sup> <sup>1</sup> Busono W., S. Maylinda, and H. Nugroho	Woro Busono	LP – 228
13.30-13.40	Physiological Responses and Milk Qualities of Holstein Friesian During Dry Season at High Altitude <sup>1</sup> E. Mariana, C. Sumantri, D. A. A. Astuti, A. Anggraeni, A. Gunawan, and N. Q. Agustin	Elmy Mariana	LP – 230
13.50-14.00	Correlation between body weight, body condition score and vital statistics of madura cattle in pamekasan, madura <sup>1</sup> <sup>1</sup> Maylinda S, M. Nasich and Pertiwi	Maylinda S (MODERATOR1)	LP – 224
14.00-14.10	Growth and development of senduro goat in senduro lumajang district <sup>1</sup> <sup>1</sup> Nasich, M., G. Ciptadi and A. Budiarto	Nasich, M	LP – 214
14.10-14.20	Senduro goats doe productivity index in senduro subdistrict lumajang regency <sup>1</sup> <sup>1</sup> Agus Budiarto, M. Nur Ihsan and A. Naufal	Agus Budiarto	LP – 210
14.20-14.30	Effects of probiotics supplementation on milk quality of etawa crossbred dairy goat fed by product of palm oil industry <sup>1</sup> <sup>1</sup> Arief, N. Jamarun and B Satria	Arief	LP – 209

14.30- 14.40	Milk production of holstein friesian cows related to heat stress in responding to climate change <sup>1</sup> <sup>1</sup> Anneke Anggraeni and Fachry Hadiyawan	Anneke Anggraeni	LP – 213
14.40- 15.00	The Effect of Water Clover Leaf Juice ( <i>Marsilea crenata</i> ) Against Blood Calcium Levels And Histology Os humerus On Rat ( <i>Rattus novergicus</i> ) <sup>1</sup> <sup>1</sup> Pratiwi Trisunuwati, Anom, and Fauzi	Pratiwi Trisunuwati	LP – 241

**Oral Presentation 05 Focus season : Socio-Economics & Others**

**Friday, 21 October 12:30-14:10 Room: Welirang**

<b>Time</b>	<b>Title</b>	<b>Presenter</b>	<b>Code</b>
12.30-12.40	Financial analysis of the pig farming that utilizing waste disposal system as environmentally friendly farming practices (A case on a pig breeding farm in Tomohon, North Sulawesi) <sup>1</sup> <sup>1</sup> Richard E.M.F. Osak, Meiske L. Rundengan and Tilly F.D. Lumy	Richard E. M. F. Osak	<b>SE – 724</b>
12.40-12.50	Farmers group's role in farming management and rabbit farmers' communication in Lang – Lang Village, Singosari District, Malang Regency, Indonesia <sup>1</sup> <sup>1</sup> S. Azizah, B. Hartono, E. Nugroho and A. E. Kusumastuti	Siti Azizah (MODERATOR 1)	<b>SE – 723</b>
12.50-13.00	The Development Program “Village Poultry Farming” to local hens Farmers of Tenga Village <sup>1</sup> <sup>1</sup> Jein Rinny Leke, F. Ratulangi, D.Rembet, and J.Mandey	Jein Rinny Leke	<b>SE – 728</b>
13.00-13.10	Utilization of pig waste to biogas in Kotamobagu City <sup>1</sup> <sup>1</sup> T. F. D. Lumy, P. O. V. Waleleng, F. N. S. Oroh, N. M. Santa and F. S. Oley	T. F. D. Lumy (MODERATOR 2)	EV – 504
13.10-13.20	Spatial distribution model of dairy cattle productivity in West Java <sup>1</sup> <sup>1</sup> Ahmad Yani, Afton Atabany, Windi Al Zahra, and Hilda Susanty	Hilda Susanty (MODERATOR 1)	EV – 501
13.20-13.30	Methane emission from beef cattle production at low- and high-altitude of East Nusa Tenggara, Indonesia <sup>1</sup> <sup>1</sup> Gustaf Oematan, Yelly M. Mulik, and Mathen L. Mullik	Marthen L. Mullik	EV – 502
13.30-13.40	The effect of parity, month of lactation and incidence of subclinical mastitis on milk yield <sup>1</sup> <sup>1</sup> H. Susanty, B.P. Purwanto, M. Sudarwanto, and A. Atabany	Hilda Susanty	LP – 216
13.40-13.50	Production and Carcass Performance of Male Local Mojokari Ducks Given the Traditional Medicine Herbs on Drinking Water <sup>1</sup> <sup>1</sup> Ita Wahyu Nursita and Nur Cholis	Ita Wahyu Nursita	LP – 238
13.50-14.00	Effect of Closed House Temperature on feed intake, weight gain and Triiodothyronine (T3) and Thyroxine	Pratiwi Trisunuwati	LP – 242

	Hormone (T4) levels of Broiler Chickens <sup>1</sup> <sup>1</sup> Pratiwi Trisunuwati		
14.00– 14.10	Production and nutrition composition of pollen from foraging honey bees ( <i>Apis mellifera</i> L.) in the red caliandra ( <i>Calliandra calothyrsus</i> ) plantation area <sup>1</sup> <sup>1</sup> Sri Minarti, Yugi Mustofa, Firman Jaya	Sri Minarti	LP – 240

## LIST OF CONTENT

<b>RECTOR SPEECH</b> .....	<b>3</b>
<b>FOREWORD DEAN THE FACULTY OF ANIMAL HUSBANDRY</b> .....	<b>5</b>
<b>WELCOME MESSAGE</b> .....	<b>6</b>
<b>SPEECH FROM CHAIRMAN OF APIS 2016</b> .....	<b>7</b>
<b>WELCOME SPEECH FROM MSAP PRESIDENT</b> .....	<b>8</b>
<b>CONGRESS COMMITTEE</b> .....	<b>9</b>
<b>OUTLINE OF THE CONGRESS</b> .....	<b>12</b>
<b>ACKNOWLEDGMENTS</b> .....	<b>13</b>
<b>PONSORS</b> .....	<b>14</b>
<b>GENERAL INFORMATION OF BATU</b> .....	<b>15</b>
<b>GENERAL INFORMATION OF THE CONGRESS</b> .....	<b>17</b>
<b>OPENING/ CLOSING CEREMONIES</b> .....	<b>19</b>
<b>PRORGAM DETAIL</b> .....	<b>20</b>
<b>INFORMATION AND CONFERENCE DETAILS</b> .....	<b>23</b>
<b>GUIDELINE FOR POSTER PRESENTATION CONFERENCE</b> .....	<b>25</b>
<b>ORAL PRESENTATION PROGRAM</b> .....	<b>26</b>
<b>LIST OF CONTENT</b> .....	<b>55</b>

### Keynote Speakers Presentation

(KS-1)	Review of Researches for Development of Sustainable Livestock Production.....	66
(KS-2)	Breeding Program of Local and Imported Beef/Dairy Cattle Breed for Development of Sustainable Livestock Production .....	72
(KS-3)	Current Analysis on Beef Self Sufficiency Program in Indonesia .....	78
(KS-4)	Current Development Trends in Global Broiler Production .....	79
(KS-5)	Feeding Management of Ruminant Animals to Reduce Their Contribution for Gas Emission .....	85
(KS-6)	Manipulation of Ruminant Fermentation and Methane Mitigation by Feeding Management: Strategic Success Keys for Smallholder Dairy Farm with Environmentally Friendly .....	88

### Oral Presentation 1 Focus Session: Feed and Nutrition (1)

(FN-392)	Smallholder dairy cattle farmer capacity in providing feeds and nutrient in several population densities of villages of Sleman Regency DIY Province – Indonesia .....	95
(FN-393)	Nutritional properties of several seaweeds species for dairy cattle .....	98
(FN-327)	Inclusion of various levels of peanut hay (rendeng) in the rabbit diet .....	101
(FN-328)	The use of corn fodder for rabbit production .....	104
(FN-359)	Development of beef cattle using agricultural by-product in West Java .....	107
(FN-361)	Changes in nutrition and fibre silage water hyacinth ( <i>Eichornia crassipes</i> ) as ruminant feed fermented with several fermentative materials.....	110

### Oral Presentation 1 Focus Session: Feed and Nutrition (2)

(FN-374)	Performance of broiler chickens fed diets supplemented with several palm polysaccharides.....	116
(FN-369)	Supplementation of the diets with rich – selenium feedstuffs on the performance of 4 weeks old broiler chickens .....	121

(FN-316)	Effects of different combination of water hyacinth ( <i>Eichornia crassipes</i> mart) leaves and sapu sapu fish ( <i>Hypostomus plecostomus</i> ) on growth performances of local ducks in Lombok .....	124
(FN-317)	Evaluation on the biological effectivity of BS4 enzymes in laying hens diet at commercial farms level .....	127
(FN-324)	The effect of Type of Microbes and Humic Acid Does to Improve The Quality and Nutriet Contents of Palm Oil Sludge .....	130
(FN-396)	Effect of probiotic supplementation in feed on meat cholesterol content and intestinal microflora of broiler .....	131

### Oral Presentation 1 Focus Session: Genetic Breeding and Conservation

(GB-106)	The qualitative and quantitative characteristics identification of bali cows having different coat color in Kupang, East Nusa Tenggara, Indonesia .....	136
(GB-107)	Mitochondrial d-loop nucleotide sequence of indonesian gayo buffalo: variation and phylogeny studies .....	141
(GB-109)	Morphology of Indonesian native ducks 1 .....	144
(GB-111)	Variation of Quantitative Traits of Kamang Duck as Local Genetic Resources in Kamang Regency West Sumatera .....	147
(GB-112)	Flock Composition, Effective Population Size, Actual Population Size And Rate of Inbreeding of Kamang Duck in Kamang Magek Regency Agam District .....	150
(GB-110)	Polimorphism of Silkworms <i>Bombyx mori</i> of two Breeding Centers (Soppeng and Temanggung) in Indonesia .....	154

### Oral Presentation 1 Focus Session: Livestock Production Systems

(LP-232)	Chickens Population and Production and Their Contribution to Human Population in Indonesia .....	156
(LP-233)	Prospects of broiler Industry in Indonesia .....	159
(LP-208)	Structural adaptation and concentrating capacity of ruminant kidney: buffalo, cattle and goat .....	162
(LP-211)	Evaluation of alabio duckdiet ( <i>anasplatyrhynchosborneo</i> ) on the chemical composition of egg yolks at farms in distric alabio south kalimantan .....	166
(LP-229)	The effect of duration of photoperiod and light intensity toward first age of laying, feed consumption, daily egg production, and feed conversion .....	170
(LP-212)	Integrated rice-duck farming system in asia .....	174

### Oral Presentation 1 Focus Session: Socio-Economics and Agribusiness

(SE-718)	An assessment of Indonesia's beef supply chain .....	178
(SE-701)	Feasibility of sugarcane - cattle integration model in supporting farmer self-sufficiency and prosperity in Kerinci Regency, Province of Jambi, Sumatera .....	179
(SE-702)	Profile analysis and application of technology in the farmer's group of ettawa crossbred goat in Yogyakarta Indonesia .....	184
(SE-703)	Profile of farmers' groups and its affectivity in supporting agribusiness on the smallholder beef cattle in Yogyakarta Province, Indonesia .....	185
(SE-704)	Socioeconomic and productive performance of smallholder dairy farm in Lampung Province, Northern Thailand .....	186
(SE-729)	Analysis of maize feed industry: a supply chain perspective .....	190



## Oral Presentation 2 Focus Session: Feed and Nutrition (1)

(FN-367) Production and milk composition of crossbred etawah goats fed on basal diet containing different levels of sesbania ( <i>Sesbania grandiflora</i> ) leaves.....	192
(FN-370) The fermentation of bagase with fungi <i>Ganoderma lucidum</i> and its ligninolytic enzyme activity.....	195
(FN-371) Encapsulated biomineral supplementation in dairy cattle ration on in vitro fermentability and digestibility.....	198
(FN-372) Effect of packaging medium on survival of napier grass stem cutting.....	202
(LP-215) Effects of Rumen Mechanical Stimulating Brush Administration on eating behavior, dry matter intake and dry matter digestibility of Brahman Cross Steers Fed with Low Forage Diet.....	205

## Oral Presentation 2 Focus Session: Feed and Nutrition (2)

(FN-373) Effect of <i>Piper retrofractum</i> as a phytogetic feed additive for broiler performance.....	207
(FN-375) Production performance and egg quality of laying hens on silage juice.....	210
(FN-376) Digestibility evaluation of microparticle protein derived from fish meal and soybean meal in broiler chicken.....	214
(FN-377) Piper betle Leaf Infuse Supplementation as Herbal Antibiotic to Reduce <i>Salmonella</i> sp. in Small Intestine of Quail ( <i>Cortunix cortunix japonica</i> ).....	217
(FN-381) The effect of addition mannase enzyme in diet on broiler production performances.....	220
(FN-344) Broiler chickens performance as affected by animal fat and plant oil under hot arid conditions of Sudan.....	223

## Oral Presentation 2 Focus Session: Socio-Economics and Agribusiness

(SE-707) Development of livestock agroindustry: increasing revenue economic and employment opportunities to local society.....	228
(SE-714) Urban community program of rabbit raising based on eco-friendly.....	231
(SE-709) Farmers' adoption to pig intensive keeping system in Taebenu Sub District, West Timor, Indonesia.....	232
(SE-720) The empowerment of Rabbit Breeders in Lang-lang Village, Singosari Districts, Malang City, East Java Province, Indonesia.....	233
(SE-713) Evaluation of productivity indicators to propose broiler performance index for assessment of broiler operations.....	234
(SE-727) Fresh Milk Quality and Information Availability on Local Stage in Malang Area East Java, Indonesia.....	238

## Oral Presentation 2 Focus Session: Reproduction

(RP-401) Sperm quality of ongole crossbred cattle on egg yolk cauda epididymal extender during cooling process in straw.....	242
(RP-405) Semen characteristics and sperm recovery rate of Aceh bull frozen semen friendly.....	245
(RP-414) Post-thawed semen quality of West Java local ram at different level of gliserol.....	248
(RP-417) Effect equilibration time in the process of freezing the quality of semen Wagyu bull using diluent (R) Andromed.....	252
(RP-423) The Effect of Mangosteen ( <i>Garcinia mangostana</i> ) Peel Filtrate Supplementation in Skim Milk based Diluent on Limousin Culled Semen Quality during Cooling Process...	255
(RP-406) The acceptability of limousine bull raw semen for frozen semen production.....	258

## Oral Presentation 2 Focus Session: Processing Product

(PP-601)	Meta-analysis of nutritional quality comparison between organic and conventional dairy products .....	263
(PP-603)	Physical characteristics and mineral composition of bone meals produced from different body parts of cattle bones by open-air burning and limed-water cooking and limed-water cooking .....	266
(PP-604)	Effect of storage time and citric acid addition on functional properties of arabian chicken egg white .....	269
(PP-607)	The Physical quality and organoleptic properties of beef meatballs in Malang, East Java, Indonesia .....	278
(PP-608)	Application of porang flour for fat replacer in reduced fat mayonnaise .....	721
(PP-609)	Effect of canna starch ( <i>Canna edulis</i> Ker) during refrigerator storage on syneresis, viscosity, and total plate count of yoghurt drink .....	282

## Oral Presentation 03: Focus Session: Feed and Nutrition (1)

(FN-302)	Biological status and conservation of anoa ( <i>Bubalus depressicornis</i> ) in tropical forest of North Sulawesi .....	284
(FN-349)	The nutritional value evaluation of ammoniated rice straw and fermented sago dregs in complete feed on performances of ongole cross breed cattle .....	287
(FN-389)	Potential Source of Feedstuffs From Oil Palm Plantation Areas For Development of Cattle Production in Indonesia .....	288
(FN-395)	Methane reduction strategy with fat supplementation for development of sustainable ruminant livestock production esia .....	291
(FN-397)	Study of the effect of fortification of herbals to multinutrient feed block on rumen fermentation and total gas production in vitro.....	295
(FN-398)	Evaluation of Edamame Husk Silage Using In Vitro Gas Production Method .....	296
(FN-359)	Development of beef cattle using agricultural by-product in West Java.....	297
(RP-407)	Nutritional responses on the hypothalamic-pituitary-ovarian axis on female goats.....	300

## Oral Presentation 3 Focus Session: Feed and Nutrition (2)

(FN-301)	Performance and egg quality of quail fed marigold flower extract and conservation of anoa ( <i>Bubalus depressicornis</i> ) in tropical forest of North Sulawesi .....	304
(FN-353)	Performance of broiler fed diets containing lipid from mealworm ( <i>Tenebrio molitor</i> L.) .....	307
(FN-378)	Propionic acid and enzymes for rabbit feed .....	310
(FN-379)	Enzyme activities and retention of Ca and P of the small intestinal digesta of broilers fed Papua Foxtail Millet containing feed .....	313
(FN-384)	Evaluation of Alabio duck diet ( <i>Anas platyrhynchos borneo</i> ) on the chemical composition of egg yolk at farms in District Alabio South Kalimantan .....	317
(FN-385)	Enrichment of Feedstuff With Fermented Soybean Peel to Increase Rabbit Body Weight .....	322
(FN-386)	Correlation of NDF (Neutral Detergent Fiber) With In Vitro Gas Production on various legumes.....	328
(FN-387)	Effectiveness of Feeding Fermented Noni Leaf Meal on Body Resistance, Protein Utilization Efficiency and Performance of Crossbred Kampong Chickens .....	332

### Oral Presentation 3 Focus Session: Genetic Breeding and Conservation

(GB-117) Measurement of reactive oxygen species (ROS) in high and low residual feed intake cattle .....	336
(GB-102) Prediction of meat quality in Bali cattle using ultrasound imaging .....	339
(GB-113) Diversity Of Insulin Growth Factor-1 (Igf-1) Gene Of Kacang Goat In Kota Gorontalo And Regency Of Bone Bolango Province of Gorontalo .....	342
(GB-105) Identification of single nucleotide polymorphism of melanocortin 4 receptor gene in Bligon goat .....	346
(GB-109) Association of leptin genes polymorphism with average daily gain of local cattle at Ciamis West Java .....	349
(GB-103) Single nucleotide polymorphism (SNP) using growth hormone (GH) gene of results reciprocal crosses Tegal with Magelang duck .....	352
(GB-116) Color variation of Indonesian native ducks .....	355
(GB-114) Polymorphism of Growth Hormone Gene in Selecting Etawah Crossbred (PE) Goats ....	359
(GB-115) Estimation of Heritability and Breeding Value for Birth Weight in Bali Cattle .....	360
(RP-416) Quality of semen and production frozen semen of different breed and individual beef cattle .....	361

### Oral Presentation 3 Focus Session: Livestock Production

(LP-234) Physical Carcass Characteristics From Body Composition of Timor Pigs Boar Kept Extensively in the Province of East Nusa Tenggara – Indonesia .....	366
(RP-417) Effect equilibration time in the process of freezing the quality of semen Wagyu bull using diluent (R) Andromed .....	369
(LP-235) The effect of cherry leaf ( <i>Muntingia calabura</i> ) extract on hatchability and embryo mortality hybrid duck egg .....	372
(LP-236) Preliminary study on estimation of energy requirement for eating through urinary creatinine in local male sheep .....	375
(LP-201) Correlation between crude protein levels in the diets and carcass weight and carcass percentage in thin tailed lambs .....	376
(LP-202) Correlation between yield grade and rib eye muscle area with different feed level protein of male thin-tailed weaning lamb .....	379
(LP-203) Correlation between fecal rough particle and feed digestibility on thin tail lambs .....	380
(LP-206) Phenotypic characteristics of Aceh cattle on different sex and age in smallholder farmers .....	381

### Oral Presentation 3 Focus Session : Veterinary and Health Care

(VT-801) Jeringau ( <i>Acorus Calamus L</i> ) As antibiotic substitute on salmonella typhimurium infected broiler performances .....	385
(VT-803) Prevalence of trematodes infection in sacrificial cattle in some mosques Manokwari regency West Papua province Indonesia .....	386
(VT-806) Identification of swine disease, prevention and treatment (a case study in Pinasungkulan village Bitung city) .....	390
(VT-807) Residues of aflatoxins in liver, meat, and egg of Alabio duck collected from South Kalimantan, Indonesia .....	393
(VT-809) Extraction of bioactive components of cocoa leaves by product and their activation as antioxidants and antimicrobials .....	397
(VT-810) In vitro antibacterial activity of Black soldier fly ( <i>Hermetia illucens</i> ) larvae extracts against gram-negative bacteria .....	402

(VT-811)	Isolation and Characterization of Oviduct Specific Glycoprotein At Goats Oviductal fluid As Candidate Isolate Supplementation of Goats Frozen Semen.....	405
(VT-812)	Antibacterial activity of <i>Muntingia Calabura</i> Lam. against some selected bacteria causes mastitis .....	406
(VT-805)	GST fusion assisted overexpression and purification of recombinant parasite lactate dehydrogenase enzyme in <i>Escherichia coli</i> .....	407

#### Oral Presentation 4 Focus Session: Feed and Nutrition (1)

(FN-303)	Profile of corn silage juice in different ages and its shelf life .....	409
(FN-307)	Effect of formic acid on intestinal truly absorbed protein of alfalfa silage .....	410
(FN-309)	In vitro dry matter degradation kinetics of ruminant feed <sup>1</sup> .....	411
(FN-310)	The effects of phenolic compounds in brown propolis extracts on rumen methane production (in vitro) .....	415
(FN-311)	Effect of corn grain physical processing on in vitro rumen microbial protein production and gas production parameters .....	419
(FN-312)	Effect of peppermint essential oil versus a mixture of formic and propionic acids on corn silage VFA score .....	420
(FN-313)	Forage production and nutritive value of <i>Clitoria ternatea</i> grown under different maize plant density .....	423
(FN-314)	Prediction of feed metabolizable energy and metabolizable protein contents from.....	426

#### Oral Presentation 4 Focus Session : Feed and Nutrition (2)

(FN-320)	Nutritional responses on the hypothalamic-pituitary-ovarian axis on female goats.....	430
(FN-321)	Effects of long transportation preceded by short periods of deprivation on the intake and nutrient digestibility of <i>Bos sondaicus</i> bulls.....	433
(FN-365)	Addition of different species of forages legumes on physical, chemical characteristics and in vitro digestibility of dairy cattle feed pellet.....	436
(FN-322)	Supplementing <i>Saccharomyces cerevisiae</i> into low quality local-based feeds improves performance and nutrient digestibility of starter local pigs .....	439
(FN-323)	Effects of poultry by product meal based diet on performances of weaning and growing pigs .....	442
(FN-343)	Growth performance and carcass composition of lambs consumed complete feed with increasing poly unsaturated fatty acids of sunflower oil .....	446
(FN-345)	Blood properties of broiler feed ration containing different Level of pearl grass ( <i>Hedyotis corymbosa</i> (L) Lamk).....	447
(FN-351)	Effect supplementation of multi-nutrient feed supplement or urea multi-nutrient molasses block in diet of dairy cattle.....	451

#### Oral Presentation 4 Focus Session: Reproduction

(RP-404)	Cleavage rate of sheep oocytes in vitro fertilized by post-thawed epididymal spermatozoa after storage of epididymis at 4° c.....	456
(RP-420)	Effect of Carnitine on Quality of Post Thawed Goat Sperm .....	459
(RP-408)	Hormone progesteron concentration at the time of Artificial Insemination (AI) on conception rate of beef cows in rural farm in West Sumatera.....	462
(RP-411)	Different ratio of omega-3 and omega-6 in total mix ration on blood metabolites, characteristic of estrous and pregnancy rate of ewes.....	463
(RP-412)	The comparison of estrus between natural and synchronized PGF2 $\alpha$ based on clinical sign and vaginal cytology in Ettawa grade .....	467

(RP-413)	The oocyte and sperms cryopreservation of local sheep and goat for gene bank in native Indonesian animal.....	471
(RP-418)	Motility spermatozoa of bali cattle after given crude tannin supplement .....	472
(RP-421)	Reproductive performance of female PO and PO x Limousin crossbred cattle in Kepanjen District of Malang Regency .....	476
(RP-422)	Estrus emerging following laser puncture induction in goats .....	477

#### Oral Presentation 4 Focus Session: Livestock Production System

(LP-204)	Correlations between crude protein / total digestible nutrients ratio with commercial cuts weight and percentage of thin tailed lambs.....	479
(LP-205)	Eating time and ruminating in lambs fed at different total digestible nutrients content of feed .....	483
(LP-223)	Growth performance of pelung sentul kampung meat type chicken crossing on age 0-10 weeks.....	484
(LP-230)	Physiological Responses and Milk Qualities of Holstein Friesian During Dry Season at High Altitude.....	488
(LP-215)	Effects of rumen mechanical stimulating brush administration on eating behavior and dry matter digestibility of brahman cross steers fed with low forage diet.....	491
(LP-217)	The study on the use of rough fecal particle proportion to estimate feed digestibility on post-weaned lambs .....	492

#### Oral Presentation 4 Focus Session : Socio-Economic and Agribusiness

(SE-717)	Business characteristic of salted egg in the agro industrial center, Brebes, Central Java..	496
(SE-726)	Application of science and technology through making compost fertilizer for group members of pig farming .....	499
(SE-716)	Impact on capital assistance group revenues pig farm "Maesaan" Pinasungkulan Bitung City .....	502
(SE-719)	Empowerment for farmers group of cattle farming in the Tonsewer Village .....	505
(SE-712)	Productivity of pigs and contribution of pig farming on household income in Pinasungkulan Village Bitung City .....	508
(SE-721)	Introduction of feed technology for development of cattle in North Bolaang Mongondow.....	511
(SE-722)	Fresh beef demand elasticity among households in Malang city .....	514
(SE-708)	Analysis of the self ability level of farmers on the integration system of cattle and oil palm plantations in Jambi Province.....	518

#### Oral Presentation 5 Focus Session : Feed and Nutrition

(FN-305)	Feed consumption and dry matter digestibility of feed containing different protein levels in thin tailed lambs fattened after weaning .....	520
(FN-390)	Effect of storage time and physical form of diet with formulated from local feed based on nutrient composition of the diets .....	524
(GB-101)	A pathway to sustainable agriculture through protection and propagation of indigenous livestock breeds of pakistan-cholistani cattle as a case study through protection and propagation of indigenous livestock breeds of pakistan-cholistani cattle as a case study. ....	527
(FN-388)	Effect of encapsulant materials in encapsulation process of leaf green grass jelly extract (Cyclea barbata L. Miers) on product microcapsule quality .....	528
(FN-394)	Nutritive value of various legume tree as protein sources in animal nutrition .....	529

(FN-390)	Effect of storage time and physical form of diet with formulated from local feed based on nutrient composition of the diets .....	530
(FN-385)	Enrichment of Feedstuff With Fermented Soybean Peel to Increase Rabbit Body Weight .....	533
(FN-344)	Broiler chickens performance as affected by animal fat and plant oil under hot arid conditions of Sudan .....	539
(FN-391)	Calcium and phosphorous absorption of field grass during the dry season at medium altitude in Garut.....	543
(FN-347)	Isolation and screening of lactic acid bacteria from dadih for glutamic acid production as precursor of $\gamma$ -Amino Butyric Acid (GABA) induced heat stress in broiler.....	546
(FN-357)	The effect of fertilizers on soil characteristics of sand-mining land and nutrients content of sorghum patir 3.7 ( <i>Sorghum bicolor</i> (L) Moench).....	550
(FN-365)	Arbuscular mycorrhizal fungi and rock phosphate role on plant growth of sorghum ( <i>Sorghum bicolor</i> L.) as a forage.....	553
(FN-364)	The Potential of Local Feed Sources for Silage Production in Supporting The Cattle Raising Business in East Ranotongkor Village .....	556

### Oral Presentation 5 Focus Session: Feed and Nutrition (2)

(FN-352)	Legumes wafer for improvement the post-weaning etawah crossbreed goats performance.....	560
(FN-332)	Utilization of cricket meal in creep feed diet of growing etawah cross breed goats .....	563
(FN-360)	Performance of first cutting of Pennisetum purpureun cv.Mott under different level of light and nitrogen fertilizer .....	567
(FN-325)	Amino acid characterization of tofu waste fermentation using effective microorganism-4 and <i>Lactobacillus plantarum</i> culture.....	570
(FN-331)	In vitro digestibility profiles of cricket meal as protein source in the ration.....	573
(FN-333)	Production of roughage feed under different drying methods and evaluation of the feeding value .....	576
(FN-335)	In vitro nutrient digestibility of <i>Chromolaena odorata</i> -based silage treated with <i>Corypha gebanga</i> meal and rumen content.....	579
(FN-336)	Production, characterization and purification of xylanase from <i>Staphylococcus aureus</i> MBXi-K4.....	583
(FN-340)	To estimate intestinal truly absorbed protein of alfalfa hay and alfalfa silage using new dutch system (DVE/OEB) .....	587
(FN-342)	Chitosan protection to saga leaves extract ( <i>Abrus precatorius</i> Linn) and Lingzhi mushroom ( <i>Ganoderma lucidum</i> ) from rumen microbial degradation.....	588
(FN-348)	Effects of different types of cakes in rations on the performance of culled Cyprus shami does in Half Elgadedda, Kassala State, Sudan .....	592
(FN-361)	Changes in nutrition and fibre silage water hyacinth ( <i>Eichornia crassipes</i> ) as ruminant feed fermented with several fermentative materials.....	598
(FN-400)	Effect of <i>Phanerochaete chrysosporium</i> to enzymatic activity and lignin on fermentation process of cocoa pod ( <i>Theobroma cacao</i> ).....	603

### Oral Presentation 5 Focus Session : Feed and Nutrition (3)

(FN-329)	Effect of fish oil and its combination with tomato powder supplementation on laying performance of native chicken .....	610
(FN-354)	Effect of substitution of meat bone meal with protein concentrate of mealworm ( <i>Tenebrio molitor</i> L) on performance of broilers .....	611

(FN-356)	Supplementation of Zn and vitamin E on the immune responses and performance of broilers in a tropical environment.....	614
(FN-358)	Supplementation of zinc and vitamin E in the diet on performance and expression of HSP70 gene of broiler in tropical environment.....	618
(FN-362)	In Supplementation of phitase and mananase in diet which high fiber and phitat acid on quality of quail eggs Coturnix – coturnik japonica .....	621
(FN-366)	Production performances of broiler chicken fed on diets containing different levels of crab (Portunuspelagicus) by- product meal .....	625
(FN-368)	Serum lipid profile and egg quality of layer fed boiled tomato waste.....	628
(FN-315)	Optimalisation usage of feed additives on low protein diet for broiler raised in the tropical region.....	631

### Oral Presentation 5 Focus Session: Livestock Production System

(LP-218)	Estimating yield grade by using body measurements and body condition score in thin-tailed sheep .....	635
(LP-219)	Exploration of fecal physical test to estimate weaning age of kids.....	639
(LP-237)	Lactation Curve Pattern and Milk Production Performance of Crossbred Friesian Holstein in Pasuruan Regency, Indonesia .....	643
(LP-226)	Correlation of Protein Level in the Diets on Yield Grade and Rib Eye Muscle Area of Post-Weaning Lamb .....	644
(LP-227)	Effects of different combination of water hyacinth leaves and sapu sapu fish on growth performances of local ducks in lombok.....	648
(LP-228)	Identification of Sonok cattle characteristics as local genetic resources in Madura island	651
(LP-230)	Physiological Responses and Milk Qualities of Holstein Friesian During Dry Season at High Altitude .....	657
(LP-224)	Correlation between body weight, body condition score and vital statistics of madura cattle in pamekasan, madura.....	660
(LP-214)	Growth and development of senduro goat in senduro lumajang district .....	670
(LP-210)	Senduro goats doe productivity index in senduro subdistrict lumajang regency .....	671
(LP-209)	Effects of probiotics supplementation on milk quality of etawa crossbred dairy goat fed by product of palm oil industry .....	672
(LP-213)	Milk production of holstein friesian cows related to heat stress in responding to climate change.....	681
(LP-241)	The Effect of Water Clover Leaf Juice (Marsilea crenata) Against Blood Calcium Levels And Histology Os humerus On Rat (Rattus novergicus).....	684

### Oral Presentation 5 Focus Session : Socio-Economics & Others

(SE-724)	Financial analysis of the pig farming that utilizing waste disposal system as environmentally friendly farming practices (A case on a pig breeding farm in Tomohon, North Sulawesi) .....	690
(SE-723)	Farmers group's role in farming management and rabbit farmers' communication in Lang – Lang Village, Singosari District, Malang Regency, Indonesia .....	693
(SE-728)	The Development Program “Village Poultry Farming” to local hens Farmers of Tenga Village cation of Sonok cattle characteristics as local genetic resources in Madura island .....	699
(EV-504)	Utilization of pig waste to biogas in Kotamobagu City .....	703
(EV-501)	Spatial distribution model of dairy cattle productivity in West Java.....	708

(EV-502)	Methane emission from beef cattle production at low- and high-altitude of East Nusa Tenggara, Indonesia .....	709
(LP-216)	The effect of parity, month of lactation and incidence of subclinical mastitis on milk yield.....	712
(LP-238)	Production and Carcass Performance of Male Local Mojosari Ducks Given the Traditional Medicine Herbs on Drinking Water.....	713
(LP-242)	Effect of Closed House Temperature on feed intake, weight gain and Triiodothyronine (T3) and Thyroxine Hormone (T4) levels of Broiler Chickens.....	714
(LP-240)	Production and Nutrition Composition of Pollen from Foraging Honey Bees ( <i>Apis mellifera L.</i> ) in The Red Caliandra ( <i>Calliandra calothyrsus</i> ) Plantation Area .....	715



## Production and Milk Composition of Crossbred Etawah Goats Fed on Basal Diet Containing Different Levels of Sesbania (*Sesbania Grandiflora*) Leaves

A R. S. Asih\*, K G. Wiryawan, I. N. Sadia, and Kertanegara

Faculty of Animal Sciences, Mataram University, Mataram, 83125, Indonesia

Corresponding email: asihrai@gmail.com

### Abstract

The study was aimed to evaluate the effect of feeding different levels of sesbania leaves (*Sesbania grandiflora*) on production and milk composition of crossbred Etawah goats given basal diet of field grass with 0% (T0), 7% (T1), 14% (T2) and 21% (T3) sesbania leaves. Sixteen lactating crossbred Etawah goats with initial body weight of  $36.7 \pm 0.76$  kg were randomly assigned into four dietary treatments so that each treatments had four replicates. Every day, each goat in all treatments was given 500 g concentrate made up of by-product of fried traditional snack; rice bran; urea and mineral mix (in proportion of 47.5%; 47.5%; 3% and 2% respectively) and 1 kg fresh banana peel. The results showed no significant difference ( $P > 0.05$ ) in total dry matter (DM) intakes among treatments. But, the DM intake of concentrate of goats fed on 21% sesbania leaves was significantly lower than those fed on control (T0) diet. Similar pattern was observed for milk production. It was significantly increased by enhancing the sesbania leaf levels, but milk protein content reduced for goats fed on 21% sesbania leaves. Milk fat content did not affected by dietary treatments, but there was a trend that it decreased as levels of sesbania leaves increased. This finding indicates that feeding less than 21% sesbania leaves in basal diet does not result in significant improvement in productivity of lactating crossbred Etawah goats.

**Keywords:** crossbred Etawah goat, milk production and composition, levels of sesbania leaves, feed intakes

### Introduction

Crossbred Etawah Goats in West Nusa Tenggara, Indonesia are being developed as a dual purposes goat type (meat and milk) to enhance nutritional status of local people (Asih *et al.*, 2015). However, not all farmers milking their goats for their nutritional status and their income due to low milk production of those goats, particularly in dry season due to lack of feed availability. Vice versa, to get an optimum milk production, the goats should be fed sufficient amount of good quality feeds. This forces farmers to spend much money which is impossible thing to do. To solve this problem, an exploration of potential locally by-product available feed were done on milking Crossbred Ettawa Goats (Asih *et al.*, 2014) and on growing-female Crossbred Ettawah Goats (Asih *et al.*, 2015) fed a concentrate consisted of 1:1 by-product of traditional fried snack industry (*rontokan gorengan*) and rice bran with 3% urea and 2% mineral mix could increase milk production and maintained the growth rate of the goats. The weaknesses of the results were the low concentrate intakes due to the high fat content of the by-product of fried traditional snack. It is expected that when the concentrate intake could be higher than the former results, the goats' productivities could also be enhanced because of increasing total dry matter intakes. To achieve this purpose, it is

therefore very important to look for alternative feed locally available as a supplement to improve milk quality and production.

Sesbania leaf is one of the tree legumes could increase milk production in humans (Widiyanti, 2009). It also a potential forage which has a high complete nutrient content (crude protein: 30.1%; fiber: 5.1%; carbohydrate: 42.3%; and ash: 10.4%) for milking goats, but its availability is very limited. Its production is relatively lower compared with other forage. It is only about 2 – 3 tons/hectare/year lead to its price to be expensive, so its' use must be efficient. Therefore, to find out the optimum level of *Sesbania grandiflora* leaf in basal diet to improve the quality and production of Crossbred Ettawa Goats milk without disturbing their digestive system, it was conducted a study to evaluate the feed intakes, milk production and composition of Crossbred Ettawa Goats given similar concentrate as previous studies (Asih *et al.*, 2014; Asih *et al.*, 2015) and basal diets containing different levels of sesbania (*Sesbania grandiflora*) leaves.

## Methodology

The study was conducted in "Gopala goat farm" located in Sengkongo Village, West Lombok, by using sixteen lactating crossbred Ettawah Goats (2 to 3 years old with the initial body weight of  $36,7 \pm 5,3$  kg; for a period of one month lactating ) were divided into four groups of four goats and each group was fed on one of four additional level sesbania treatments (T0 = 0%; T1= 7%;T2 = 14% and T3 = 21% sesbania leaves on DM basis based on the preliminary study according to Completely Randomized Design.

**Table 1.** The amount of feed implementation to each treatment on lactating goats on DM basis, except for banana peel on fresh basis

Types of feeds (kg/head/day)	Treatments				Frequencies and times feeding
	T0 (0%)	T1 (7%)	T2 (14%)	T3 (21%)	
Field grass	1 kg	1 kg	1 kg	1 kg	3 x a day (morning; noon; afternoon)
Sesbania leaf	0 kg	0.07 kg	0.14 kg	0.21kg	1 x a day (morning)
Banana peel	1 kg	1 kg	1 kg	1 kg	1 x a day (morning)
Concentrate*	0.5 kg	0.5 kg	0.5 kg	0.5 kg	1 x a day (morning)

\* Theconcentrate was made up of by-product of fried traditional snack; rice bran; urea and mineral mix in proportion of 47.5%; 47.5%; 3% and 2% respectively.

The goats were penned in individual cages and the feeding technique is shown in Table 1. Daily feed intake of each feed type and total daily DM intakes were measured for 6 weeks, while milk production was measured for three weeks at last 3 weeks of the study and milk samples were taken in the last week of the study to measure the milk composition (total solid, protein and fat content). Data were analyzed using PROC ANOVA (Sas, 1990) and differences between treatment means were separated using Duncan multiple range test.

## Results and Discussion

Responses of milking crossbred Ettawah goats fed additional sesbania leaf levels on dry matter (DM) intakes of each feed, total DM intakes, milk production and composition is presented in Table 2. Increasing levels of sesbania leaf in the forage did not significantly ( $P>0.05$ ) influence DM intakes of each feed, except for DM intake of concentrate. It reduced when the treatment levels increased due to the goats prefer to finish sesbania leaf first than consume the concentrate. However, milk production enhanced significantly ( $P<0.05$ ) with increasing sesbania leaf levels up to 21%, although the total DM intakes were not differ among the treatments (Table 2). This indicates that the nutrient content of the 21% sesbania leaf level played an important role in milk production, and lower levels was not efficient.

In contrary, milk protein contents decreased significantly when the goats given additional sesbania level of 21% and the milk fat content also declined, although it was not significant ( $P>0.05$ ). This result was in accordance to the basic dairy theory that when the milk production increase, milk composition reduced.

The best response of the 21% sesbania treatment on milk production and in body condition of the does until the end of the study indicated that those levels is a minimum level in the basal diet of field grass fed to lactating crossbred Ettawah goats. Further study is still needed to find the optimum sesbania level in the diet of milking goats.

**Table 2.** Nutrient intakes, water consumption, ADG, and FCR of growing-female crossbred Ettawah goats.

Parameter	T0 (0%)	T1 (7%)	T2 (14%)	T3 (21%)	Sign
<b>DM Intake of feed</b>					
Field grass (kg/day).	0.9020	0.8450	0.8900	0.7250	Ns
Banana peel (kg/day)	0.1375	0.1400	0.1400	0.1375	Ns
Concentrate (kg/day)	0.3200 <sup>a</sup>	0.2875 <sup>ab</sup>	0.2925 <sup>ab</sup>	0.2475 <sup>b</sup>	**
Concentrate (g/kg BB)	8.9 <sup>a</sup>	8.0 <sup>ab</sup>	7.8 <sup>ab</sup>	6.7 <sup>b</sup>	**
Sesbania leaf (kg/day)	0.00 <sup>d</sup>	0.07 <sup>c</sup>	0.13 <sup>b</sup>	0.20 <sup>a</sup>	***
Total DM intakes (kg/day)	1.3600	1.3350	1.4525	1.3100	Ns
<b>Productivity</b>					
Milk production (ml/day)	587.00 <sup>b</sup>	651.50 <sup>ab</sup>	763.30 <sup>ab</sup>	853.80 <sup>a</sup>	**
Milk protein content (%)	3.57 <sup>a</sup>	3.68 <sup>a</sup>	3.62 <sup>a</sup>	3.07 <sup>b</sup>	**
Milk fat content (%)	7.66	6.27	6.58	5.94	Ns
<b>Body Weight Changes</b>					
Initial weight (kg)	36.00	36.13	37.63	37.00	Ns
Final body weight (kg)	36.38	37.25	38.88	38.50	Ns

Ns: not significantly different; \*\*: significant different; \*\*\*: highly significant different

## Conclusion

Feeding *sesbania grandiflora* leaves with the level of less than 21% of the basal diet does not result in significant improvement in productivity of lactating crossbred Ettawah goats. It needs further study to find out the optimum levels of this feed in different types of basal diets given to lactating goats.

## References

- Asih, A. R. S., K.G. Wiryawan, I.N. Sadia, and Kertanegara. 2014. Productivity of Crossbred Etawah Goats Fed by-product of Traditional Fried Snack Industry with Different Level of Urea. *The 2<sup>nd</sup> Asian-Australian Dairy Goat Conference, April 25 – 27<sup>th</sup>, 2014, Bogor, Indonesia.*
- Asih, A. R. S., K.G. Wiryawan, I.N. Sadia, and Kertanegara. 2015. Responses of Growing-Female Crossbred Ettawa Goats Fed Concentrates Containing by-product of Traditional Fried Snack Industry with Different Levels of Urea. *The 6<sup>th</sup> International Seminar on Tropical Animal Production, October 20 – 22<sup>th</sup>, 2015, Yogyakarta, Indonesia.*
- SAS Institute Inc. 1990. SAS/STAT User's Guide, version 6, 4th edn. SAS Institute Inc., Cary, NC.USA
- Widiyanti, R.. 2009. *Analisis Kandungan Senyawa Fenol.* Universitas Indonesia Press, Jakarta.



Organized by Faculty of Animal Husbandry, University of Brawijaya

**A. R. S. Asih**

has participated in

**The 3<sup>rd</sup> Animal Production International Seminar &  
The 3<sup>rd</sup> ASEAN Regional Conference on Animal Production**

**“ Enhancing Synergistic Roles of Stakeholders for Development of Sustainable Livestock Production ”**

as

**Oral Presenter**

at Royal Orchid Garden Hotel and Condominiums, The Shining City of Batu,

19-21 October 2016

Dean,

Prof. Dr. Sc. Agr. Ir. Suyadi, MS.

Committee of APIS & ARCAP 2016

Dr. Ir. Marjuki, M.Sc.

Our Partner Program by :



Sponsored by :

