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

Program and Abstracts

22-25 AUGUST 2016
CONGRESS VENUE: FUKUOKA JAPAN

www.aaap2016.jp
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Asian-Australasian Association of Animal Production Societies

✧ Scope of AAAP: AAAP is established to devote for the efficient animal production in the Asian-Australasian region through national, regional, international cooperation and academic conferences.


✧ Organization of AAAP:
  - President: Recommended by the national society hosting the next biennial AAAP Animal Science Congress and approved by Council meeting and serve 2 years.
  - Two Vice Presidents: One represents the present host society and the other represents next host society of the very next AAAP Animal Science Congress.
  - Secretary General: All managerial works for AAAP with 6 years term by approval by the council
  - Council Members: AAAP president, vice presidents, secretary general and each presidents or representative of each member society are members of the council. The council decides congress venue and many important agenda of AAAP

✧ Office of AAAP: Decided by the council to have the permanent office of AAAP in Korea. Currently # 909 Korea Sci & Tech Center Seoul 135-703, Korea


✧ Current 19 Member Societies of AAAP:
  - ASAP(Australia), BAH(Australia), CAAV(China), IAAP(India), ISAS(Indonesia), IAAS(Iran), JSAS(Japan), KSAST(Korea), MSAP(Malaysia), MLSBA(Mongolia), NASA(Nepal), NZSAP(New Zealand), PAHA(Pakistan), PNGSA(Papua New Guinea), PSAS(Philippines), SLAAP(Sri Lanka), CSAS(Taiwan), AHAT(Thailand), AHAV(Vietnam).

✧ Previous Venues of AAAP Animal Science Congress and AAAP Presidents

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Welcome Message

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

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

Prof. Mitsuhiro FURUSE
President of 17th AAAP
Committee Members

Mitsuhiro FURUSE
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Kei HANZAWA
Chair of Fund Raising, Public Relations, and Registration
Naomi KASHIWAZAKI
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Tetsuo MORITA
Tatsuyuki YOSHIDA
Outline of the congress

Congress Name

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

Theme

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

President

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

Date

22-25 August, 2016

Venue

Kyushu Sangyo University
hotel nikko fukuoka

Official Website

http://www.aaap2016.jp/

JAPANESE SOCIETY OF ANIMAL SCIENCE (JSAS)

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FAX: +81-(0)3-3828-7649 / E-mail: support@jsas-org.jp

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

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

Foundations

Fukuoka Prefecture
  Fukuoka City
  The Ito Foundation
  JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE

Grant-in-Aid for Publication of Scientific Research Results (JP16HP0305)
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Yasuhiro TSUZUKI

University of the Ryukyus
Yoshimi IMURA

alphabetical order / titles omitted
O-10-4 EFFECTS OF FEED SUPPLEMENT ON THE ARTIFICIAL INSEMINATION EFFICIENCY OF BEEF COWS UNDER SMALL FARMS CONDITION IN INDONESIA
A. Latief Toleng¹, Muhammad Yusuf¹, Surya Darma²
¹ Hasanuddin University, Indonesia, ² Department of Livestock Services, Indonesia

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

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

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

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

O-10-9 The Quality of Chilled Semen Ongole Crossbred Cattle with the Replacement of Source Albumin in Cauda Epididymal Plasma-2 Diluter
Aulia Puspita Anugra Yekti¹, Enike Dwi Kusumawati², Nisaus Sholikah³, Muchamad Luthfi⁴, Lukman Affandhy⁵, Dicky Pamungkas⁶, Kuswati Kuswati¹, Aswha Ridhowi¹, Herni Sudarwati¹, Nurul Isnaini¹, Trinil Susilawati¹
¹ Animal Husbandry Faculty of Brawijaya University, Indonesia, ² Animal Husbandry Faculty of Kanjuruhan University, Indonesia, ³ Beef Cattle Research Station, Pasuruan Indonesia

O-10-10 Association between number of follicles at the onset of Shortsynch and fertility in Japanese Black cows
Takeshi Osawa¹, Masashi Tanaka¹, Yuji Tsubakishita¹, Takashi Ekawa¹, Koichiro Hemmi², Ikuo Kobayashi², Mizuho Uematsu³, Go Kitahara¹
¹ Laboratory of Theriogenology, University of Miyazaki, ² Sumiyoshi Livestock Science Station, University of Miyazaki, ³ Department of Production Medicine, NOSAI Miyazaki

Oral Session 11: Animal Nutrition (Ruminants) (1)

Chair: Indah Prihartini  Faculty of Agriculture and Animal Science, University of Muhammadiyah Malang

O-11-1 Effect of Kaempferia galanga L. on in vitro nutrients digestibility, ruminal fermentation and methane production
Asih Kurniawati¹², Widodo¹, Wayan T Artama², Lies Mira Yusati²
¹ Faculty of Animal Science Universitas Gadjah Mada, ² Faculty of Veterinary, Universitas Gadjah Mada
O-11-2 EVALUATION ON INNOCULUM OF CYTOPHAGA Sp AS PROBIOTIC IN RUMINANT BY IN VITRO GASEOUS PRODUCTION APPROACH
Indah Prihartini
Faculty of Agriculture and Animal Husbandry, University of Muhammadiyah Malang

O-11-3 THE EFFECT OF REJECTED SOYBEAN SUPPLEMENTATION WITH DIFFERENT TREATMENTS ON CROSSBRED CATTLE FEED
Bambang Suhartanto, Ristianto Utomo, Satria Budi Kusuma, Dian Astuti
1 Faculty of Animal Science, Gadjah Mada University, 2 Center of Agrotechnology Innovation, Gadjah Mada University

O-11-4 EFFECTS OF NITRATE, EXTRACTED CHITOSAN OR SHRIMP SHELL MEAL ON DEGRADABILITY AND IN VITRO PRODUCTION
Thao Nguyen The, Metha Wanapat
1 Department of Animal Science and Veterinary Medicine, Faculty of Agriculture and Natural Resources, University of Vietnam, 2 Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand

O-11-5 EXISTING FEED BALANCE IN MIXED FARMING SYSTEMS IN AN AGRICULTURAL CITY OF PROBOLLINGG, EAST JAVA OF INDONESIA
Ifar Subagiyo, Veronica Margareta Ani Nurgiartiningsih, Suprih Bambang Siswijono, Mashudi Mashudi
University of Brawijaya

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

O-11-7 THE CHARACTERISTIC OF MICROENCAPSULATION OF SESAME OIL WITH DIFFERENT COATING MATERIALS AND ITS EFFECT ON IN VITRO RUMEN FERMENTATION
Sri Suharti, Farisa Diftairani, Raden Noviani, Asep Sudarman, Suryahadi Suryahadi
Department of Nutrition and Feed Technology, Faculty of Animal Science, Bogor Agriculture University

O-11-8 BACTERIAL COMMUNITIES OF MILK AND COW SHED SAMPLES IN RELATION TO CHANGES OF THE SOMATIC CELL COUNT
Haoming Wu, Yusuke Sugimoto, Yuji Tanabe, Takeshi Turuda, Naoki Nishino
1 Okayama University, 2 Okayama Livestock Research Institute

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

O-11-10 SOMATIC EMBRYOGENESIS AND REGENERATION OF BRACHIARIA DECUMBENS FROM IMMATURE INFLORESCENCES
Nilo Suseno, Fitria Gemma Tyasari, Rani Agustina, Bambang Suwignyo, Bambang Suhartanto, Nafiul Umami
1 Dept. of Animal Nutrition Faculty of Animal Science Gadjah Mada University Indonesia, 2 Dept. of Agronomy Faculty of Agriculture Gadjah Mada University Indonesia
O-15-8  Effects of pine bark extract (flavangenol©) on heat shock protein expression in chicks
Hui Yang¹, Vishwajit S Chowdhury², Mohammad A Bahry¹, Phuong V Tran¹, Phong H Do¹, Guofeng Han¹, Rong Zhang¹, Hideki Tagashira¹, Masahito Tsubata¹, Mitsuhiko Furuse¹
¹Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan,
²Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan,
³Division of Endocrinology, Department of Medicine, Boston Children’s Hospital, Harvard Medical School, USA,
⁴Research and Development Division, Toyo Shinyaku Co., Ltd., Japan

O-15-9  COMPARATIVE STUDY OF NUTRITIONAL CONTENT AND PROTEIN PROFILE OF MALAYSIA EDIBLE BIRD NEST
STALIN JOEFREY¹, AINI IDERIS¹,², INTAN SAFINAR ISMAIL⁵, FARIDAH ABAS⁵, JALILA ABU¹,³, NORASFALIZA RAHMA⁶, MOKRISH AJAT¹,², ROZAIHAN MANSON¹,⁴
¹Centre of Excellence on Swiftlets, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
²Department of Veterinary Preclinical Sciences, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
³Department of Veterinary Clinical Studies, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
⁴Department of Medicine and Surgery of Farm and Exotic Animal, Faculty of Veterinary Medicine, Universiti Putra Malaysia,
⁵Laboratory of Natural Products, Institute of Bioscience, Universiti Putra Malaysia,
⁶Agro-Biotechnology Institute Malaysia, National Institutes of Biotechnology Malaysia, c/o MARDI Headquarters, Malaysia

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

Oral Session 16: Animal Reproduction (2)

Chair: Junya Ito  Azabu University

O-16-1  The Effect of Sexed Semen Methods Toward Motility and Ratio of X and Y Sperm Filial Ongole Cattle
Enike Dwii Kusumawati¹, Nurul Isnaini², Aulia Puspita Anugra Yekt³, Nisaus Sholikah⁴, Muchamad Luthfi⁵, Lukman Affandhy⁶, Dicky Pamungkas⁷, Kuswati⁸, Aswah Ridhowi⁹, Herni Sudarwati¹⁰, Trinil Susilawati¹¹
¹Animal Husbandry Faculty, Kanjuruan University, Indonesia,
²Animal Husbandry Faculty, Brawijaya University, Indonesia,
³Student of Animal Husbandry Faculty, Brawijaya University, Indonesia,
⁴Beef Cattle Research Station, Indonesia

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

O-16-3  Calf Birth Weight and Post Partum Estrus Bali Cow Fed Complete Feed From Palm Oil Plantation in Central Borneo Indonesia
Mudhita Ida Ketut¹, Baliarti Endang², Priyono Sasmito Budhi Subur², Umami Nafiati², Noviadi Cuk Tri², Kustono², Suparta Budisatria I Gede³, Wattimena Jeffrie³
¹Antakusuma University Faculty of Agriculture, ²Gadjah Mada University Faculty of Animal Science,
³Pattimura University Faculty of Agriculture
0-23-7 Expression profile of mood-related genes in the prefrontal cortex of Rev-erb alpha deficient mice
Tsuyoshi Otsuka, Akira Kohsaka, Hue Le Thi, Tomorni Nakao, Masanobu Maeda
Wakayama Medical University School of Medicine

0-23-8 Action of insulin-like factor 3 (INSL3) as a germ cell survival factor in boars
Tetsuya Kohsaka1, Itaru Minagawa1, Dai Sagata1, Ali Mohammed Pitia2, Kei Terada3, Masatoshi Shibata1, Yoshihisa Hasegawa4, Hiroshi Sasada4
1 Laboratory of Animal Reproduction and Physiology, Faculty of Agriculture, Shizuoka University, Japan,
2 Division of Animal Resource Production, The United Graduate School of Agricultural Science, Gifu University, Japan,
3 Laboratory of Animal Reproduction, School of Veterinary Medicine, Kitasato University, Japan

0-23-9 Muscle fiber type visualization using four anti-myosin heavy chain antibodies
Shoko Sawano1, Yusuke Komiya2, Riho Ichitsubo3, Mako Nakamura2, Ryuichi Tatsumi2, Yoshihide Ikeuchi2, Wataru Mizunoya2
1 Fukuoka Women’s Junior College, 2 Kyushu University

0-23-10 Impact of oral L-citrulline administration on thermoregulation and heat-tolerance in chicks
Vishwajit Chowdhury1, Phuong V Tran2, Mohammad A Bahy3, Phong H Do4, Hui Yang5, Guofeng Han5, Mitsuhiko Furuse2
1 Division for Experimental Natural Science, Faculty of Arts and Science, Kyushu University, Japan,
2 Laboratory of Regulation in Metabolism and Behavior, Graduate School of Bioresource and Bioenvironmental Science, Kyushu University, Japan

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

Chair: Metha Wanapat Khon Kaen

0-24-1 PRODUCTIVITY AND NUTRIENTS QUALITY OF TWO VARIETIES Brachiaria sp ON DIFFERENT LEVEL OF FERTILIZER IN YOGYAKARTA INDONESIA
Nafiatur Umami, Bambang Suhartanto, Meita Puspa Dewi
Faculty of Animal Science Universitas Gadjah Mada

0-24-2 EFFECTS OF FEEDING DAIRY COW WITH INOCULATED CORN SILAGE ON MILK QUALITY
Li-Chen Kao1, Jin-Seng Lin1, Hung-Hsi Hu2, San-Land Young1, Shi-Yong Li1
1 SynbioTech Inc., Taiwan, 2 Department of Food Science, National Penghu University, Taiwan

0-24-3 Performance of tropical dairy cows fed on cassava top silage in rice straw based diet
Metha Wanapat1, Kampanat Phesatcha1, Bounnaxay Viennasay1, Sungchhang Kang2
1 Tropical Feed Resources Research and Development Center (TROFREC), Department of Animal Science, Faculty of Agriculture, Khon Kaen University, Thailand,
2 Agricultural Unit, Department of Education, National Institute of Education, Cambodia

0-24-4 Fatty Acid Composition in M. longissimus dorsi muscle of Thai Swamp Buffalo Feeding by Soybean Oil Supplement within Concentration Rations
Pattharphon Patthararangsarit1, Suwit Boonprong2
1 King Mongkut’s Institute of Technology Ladkrabang, 2 Ministry of Agriculture and Cooperative

0-24-5 Potential of Mixed Feed Palm Kernel Meal and Oil Palm Decanter Cake was Fermented by Rhizopus oligosporus for Bali Cattle
ROFIQ MUHAMAD NASIR1, Wina Elizabeth2, Angga I Wayan1, Gopar Ruslan Abdul1
1 Centre for the Agricultural Production Technology, BPPT, Indonesia,
2 Indonesia Research of Animal Production, Agricultural Ministry
0-40-2 Effect of Fungal Treated Oil Palm Fronds in the Diet of Goats
Pin Chanjula¹, Vasun Petcharat², Puwadon Hamchara³, Anusong Cherdthong³
Prince of Songkla University

0-40-3 Nutritional Status of Kangac Goats Fed Ruminally Undegradable Protein to Improve their Productivity
A Kustantinah¹, Edwin Indarto¹, Rusman¹, I Gede Suparta Budisatria¹, Retno Adiwinarti²
¹ Universitas Gadjah Mada, Indonesia; ² Faculty of Animal Agriculture, Universitas Diponegoro, Indonesia

0-40-4 Effects of replacing concentrate with wet soya milk residue on intake, digestibility and growth performance of goats
Pattaraporn Tatsapong
Naresuan University, Faculty of Agriculture, Natural Resources and Environment

0-40-5 The Sodium nitrate addition in total mixture fermentation of tofu waste as ration on methane production of the rumen fluid
Zaenal Bachruddin, Sifa Latiefah
Gadjah Mada University

0-40-6 Digestibility and Nitrogen Balance of Male Bligon and Kejobong Goat Fed Peanuts Straw
Lies Mira Yusiatı, Chusnul Hanim, Dianesty Putra
Faculty of Animal Science, Universitas Gadjah Mada

0-40-7 The comparison of nutrient digestibility of Bligon and Kejobong goats fed king grass and peanuts straw
Chusnul Hanim, Lies Mira Yusiatı, I Gede Suparta Budisatria, Fandi Widyas Rachman
Faculty of Animal Science, Universitas Gadjah Mada

0-40-8 STUDY FOR DOMINANCE AND NUTRITION OF WEEDS AS FEED IN VARIOUS CROP LAND IN YOGYAKARTA
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Paiwan Panyakaew¹,², Thomas Schonewille³, Chalermpoon Yougklang⁴, Wouter Hendriks¹³
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0-40-10 Determination of energy and protein requirements of sheep in Indonesia using a meta-analytical approach
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STUDY FOR DOMINANCE AND NUTRITION OF WEEDS AS FEED IN VARIOUS CROP LAND IN YOGYAKARTA

Bambang Suwignyo, Nafiatul Umami, Nilo Suseno, Wahyudin Wahyudin, Bambang Suhartanto
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The study aimed to determine the dominant species and nutrient content of weeds as feed on a variety of agricultural land in Yogyakarta. Observations were conducted on paddy fields, corn, beans and vacant land of Pakem upperland area (621 m asl), as well as paddy fields, chili and vacant land Samas lowland area (10 m asl), three area each. The research was conducted in September-October 2015. The observations were done using line intercept transect technique. Sample weed identification and quality examination (proximate) was done at the Laboratory of Forage and Pasture Science, Faculty of Animal Science UGM. Results showed that dominant of weeds in the lowland for shrub type were *Phyllanthus amarus*, *Commelina benghalensis*, *Ludwigia octovalvis* and *Portulaca oleracea* while the type of grass were *Leptochlo achinensis*, *Eleusine indica*, *Cyperus compressus*, *Paspalum distichum* and *Brahariamutica*. Dominant of weeds in the upperland for shrub type were *Ageratum conyzoides*, *Eclipta alba*, *Ludwigia octovalvis*, *Cleome rutidosperma* and *Portulaca oleracea* for type of grass were *Digitaria setigera*, *Eleusine indica*, *Cyperus iria*, *Echinochoa oryzides* and *Fimbristylis miliacea*. Thus, found three dominant of weeds with quality of DM and OM respectively Ludwigia octovalvis (18.76%90.95%), Portulaca oleracea (8.09%76.70%) and Eleusine indica (20.67%88.38%).

INTRODUCTION

Forage crops is the main feed for ruminants. However, usually forage production and crops decreases in the dry season. This situation impact to potential feed for livestock. These deficiencies must be fulfilled in order not to lower productivity of livestock. One of alternatif is to find plants that can grow during the dry season. One such plant is a weed. Purnomo (2010) stated that the weed is often defined as a plant that grows in places that are not desired by humans through the competition space of time, and a source of nutrients.

There are several types of plants that are classified as weeds, namely grass, shrubs, and legumes. Barus (2003) states there are also ways that can be used to classify weeds, for example based on morphology, life cycle, habitat, or under the influence on agricultural crops. Types of weeds that grow in an area of course different from other regions. It was influenced by growth factors, namely light, water, temperature, and soil types.

Special Region of Yogyakarta area consists of lowlands to highlands. There are an agricultural land that can not be separated from the weeds. Differences location in Yogyakarta might be affect the types of weeds that grow and also quality of nutrients that exist. Results of research Suwignyo et al. (2012) showed that the corn crop is in the lowlands have the potential of dry material better than on corn from the highlands.

MATERIALS AND METHODS

Time and Place Research

Research was conducted at two locations in the lowlands and highlands in Yogyakarta. Land used on the plateau is a land area of Rice, Corn, Beans and vacant land, while the land is lowland rice, chili and vacant land. The research was conducted from September to October 2015, located in Pakem (plateau) and Samas (lowlands), ie by 2 different places and carried out from September to October 2015.

Tools

The tools used in this study include field equipment to test the productivity include scissors, tape measure, sickles, digital scales, camera, plastic samples, pencils, books and also a set of tools for proximate analysis in the laboratory.

The materials used in this study include some farms in Yogyakarta with the height difference, but it is also a set of materials used for proximate analysis in the laboratory.

Method

Research methods
The study was conducted in three phases namely weed identification, measurement dominance of weeds, and the weeds quality test.

**weed identification**

Various types of weeds derived from field observations identified in the laboratory. Forage Forage and Pasture Faculty of Animal Husbandry Universitas Gadjah Mada. Identification was conducted on the classification of plants, the growth cycle, breeding and habitat. Identified weed species are weeds types of grasses, legumes, and shrubs.

**Measurement dominance of weeds**

*Weed productivity test was performed using line intercept transect*

** Intercept line transect technique.** Measurement productivity weed with an *intercept line transect technique performed according to the method Moody et al. (1984).* Made path/transect along 30 m using raffia. The line is divided into intervals. Each interval represents one sample unit. All the plants are off ended by the line transect situated below and above the line was observed and recorded.

**Sampling**

Weeds that of the land studied is taken as a sample of approximately 500 g/proximate weeds that will be analyzed in the laboratory. Not all weeds are taken for analysis of proximate but only five of the most widely weeds for each type.

**Proximate analysis**

Analysis of samples that will be done is the Proximate analysis includes dry matter (DM) and organic matter (OM).

**Data analysis**

The data retrieved is data weeds in the highlands and lowlands in the Yogyakarta region and will be analyzed descriptively.

**RESULTS AND DISCUSSION**

This research was conducted in the Territory of Yogyakarta Precisely in the area Samas, Bantul with a height of 10 meters above sea level and in Pakem, Sleman with a height of 621 meters above sea level. Here are the climate data obtained from BMKG at the time of the study from September to October 2015:

<p>| Table 1. Climate data Yogyakarta |</p>
<table>
<thead>
<tr>
<th>Month</th>
<th>Air temperature(0C)</th>
<th>Humidity (%)</th>
<th>Wind speed (m / s)</th>
<th>Solar radiation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>25.6</td>
<td>77</td>
<td>0.2</td>
<td>89</td>
</tr>
<tr>
<td>October</td>
<td>26.8</td>
<td>75</td>
<td>0.2</td>
<td>92</td>
</tr>
</tbody>
</table>

<p>| Table 2. Data monthly rainfall (mm) |</p>
<table>
<thead>
<tr>
<th>locations</th>
<th>September</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lowland</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plateau</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Based on Table 1 it can be seen that in September 2015 major air temperature, air humidity, wind speed, and solar radiation respectively is 25.6°C, 77%, 0.2 m/s, 89%. Large air temperature, air humidity, wind speed, and solar radiation respectively is 26.8°C, 75%, 0.2 m/s, and 92%. While in table 2 shows rainfall in September and October show the number 0. It shows the sampling carried out during the dry season.

The elements of the existing climate affects the growth, including whole plants and weeds. Darmawijaya (1997) stated the elements - elements of the climate that can affect the quality of plants such as rainfall, temperature, humidity, length of the dry months (rainfall less than 60 mm/month), and altitude above sea level. The main components of the climate is rainfall and temperature. Both components were interrelated.

**Domination**

Based on research, there are some dominant weed species and can grow in a wide variety of land in the lowlands and the highlands can be seen in the following table:

Table 3. Weeds are dominating in the lowlands and highlands

<table>
<thead>
<tr>
<th>locations</th>
<th>name of species</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>High land</td>
<td><em>Fimbristylis miliacea</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Echinochoa oryzides</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Cyperus iria</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Eleusine indica</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Digitaria setigera</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Portulaca oleracea</em></td>
<td>bush</td>
</tr>
<tr>
<td></td>
<td><em>Cleome rutidosperma</em></td>
<td>bush</td>
</tr>
<tr>
<td></td>
<td><em>Ludwigia octovalvis</em></td>
<td>bush</td>
</tr>
<tr>
<td></td>
<td><em>Eclipta alba</em></td>
<td>bush</td>
</tr>
<tr>
<td></td>
<td><em>Ageratum conyzoides</em></td>
<td>bush</td>
</tr>
<tr>
<td></td>
<td><em>Mimosa pudica</em></td>
<td>legumes</td>
</tr>
<tr>
<td>Lowland</td>
<td><em>Brachiaria mutica</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Paspalum distichum</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Cyperus compressus</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Eleusine indica</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Leptochloa chinensis</em></td>
<td>grass</td>
</tr>
<tr>
<td></td>
<td><em>Portulaca oleracea</em></td>
<td>bush</td>
</tr>
</tbody>
</table>
Ludwigia octovalvis
bush
Commelina benghalensis
bush
Phyllantus amarus
bush
Weeds bush*
bush

* Description: Weed identification is unknown bushes

Based on Table 3, note that the weed species of grasses and shrubs were encountered both in the highlands and lowlands. As for the type of legume weed is only in the highlands. The data in Table 3 show only five dominant weeds every kind from any location. All data of the weed in getting from all the land of each location. Land used in high flatness is the land of rice, beans, corn, and vacant land. While in the low-lying land used was paddy field, chili, and vacant land.

Rukmana and Sugandi (1999), stated category includes grass weed species belonging to the family Gramineae types. Besides being the largest component of the entire population of weeds, the family have a fairly high adaptability, distribution is very broad and can grow well in dry or waterlogged soil.

**Levels Dry Matter and Organic Matter**

Dry matter (DM) and organic matter (OM) content data and weeds from the lowlands and the highlands can be seen in Table 4 below:

<table>
<thead>
<tr>
<th>Locations</th>
<th>DM (%)</th>
<th>OM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fimbristylis miliacea</td>
<td>17.3079</td>
<td>80.6918</td>
</tr>
<tr>
<td>Echinochoa oryzides</td>
<td>14.1564</td>
<td>87.9473</td>
</tr>
<tr>
<td>Cyperus iria</td>
<td>21.3947</td>
<td>90.2614</td>
</tr>
<tr>
<td>Eleusine indica</td>
<td>19.5299</td>
<td>88.1041</td>
</tr>
<tr>
<td>Digitaria setigera</td>
<td>17.8224</td>
<td>89.7173</td>
</tr>
<tr>
<td>Portulaca oleracea</td>
<td>7.5340</td>
<td>75.7711</td>
</tr>
<tr>
<td>Cleome rutidosperma</td>
<td>13.1484</td>
<td>86.5825</td>
</tr>
<tr>
<td>Ludwigia octovalvis</td>
<td>16.9437</td>
<td>89.9868</td>
</tr>
<tr>
<td>Eclipta alba</td>
<td>13.8718</td>
<td>82.1705</td>
</tr>
</tbody>
</table>
Dry matter is a very important parameter to estimate the quality of the feed material and used as a guideline to determine the nutrient content of the feed materials. Based on the data in Table 4, the highest known levels of DM in the highlands of the type of grass, shrubs, and legumes respectively Cyperus iria is 21.39%, Ludwigia octovalvis 89.98%, and 92.66% Mimosa pudica. While DM highest levels in the lowlands of species of grasses and shrubs in a row is Brachiaria mutica Phyllantus amarus 33.06% and 21.23%.

Looking at the data in Table 4, there are three weeds that grow in the lowlands and highlands. All three of the weed is Eleusine indica, Portulaca oleracea, and Ludwigia octovalvis. Of the three weeds, levels of BK in lowland larger than the plateau. That is because the conditions in the lowlands are warmer because it is adjacent to the beach.

Based on the data in Table 4, the highest known levels of OM in the highlands of the type of grass, shrubs, and legumes respectively Cyperus iria is 90.26%, Ludwigia octovalvis 89.98%, and 92.66% Mimosa pudica. While the highest levels of BO in the lowlands of species of grasses and shrubs in a row is Eleusine indica Ludwigia octovalvis 88.65% and 91.92%. Of the three weeds that grow in both locations, levels of OM in the lowlands is higher than the weeds in the highlands.
CONCLUSION

Weed species of grasses and shrubs are the dominant weed species both in lowland and highland. Weeds are located in lowland areas have the potential of dry matter and organic matter better than the plateau.

KEYWORD: weeds, domination, feed upperlands, lolands, nutrients

REFERENCES
CERTIFICATE
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participated in the 17th Animal Science Congress held on August 22-25, 2016 in Fukuoka, Japan.

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