

**LEMBAR  
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW  
KARYA ILMIAH : PROSIDING**

Judul karya ilmiah (makalah) : The Biological Quality Of Adding Fermented Waste Cabbage As Probiotic Source To Pellet Calf Starter On Calf Performance

Jumlah Penulis : 5 orang

Status Pengusul : penulis pertama

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Unit Kerja : Fakultas Peternakan dan Pertanian

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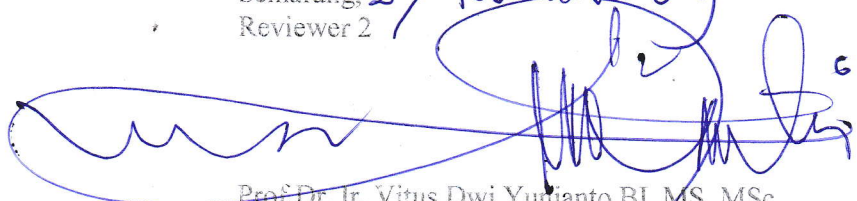
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	Internasional	Nasional	
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## The Biological Quality of Adding Fermented Waste Cabbage as Probiotic Source to Pellet Calf Starter on Calf Performance.

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# PROCEEDING INTERNATIONAL CONFERENCE 6<sup>th</sup> SAADC 2017

Conference on Sustainable Animal Agriculture for Developing Countries

**“WISDOM OF USING LOCAL RESOURCES FOR DEVELOPMENT OF  
SUSTAINABLE ANIMAL PRODUCTION IN DEVELOPING COUNTRIES”**



**The Singhasari Resort, Batu City, Indonesia, October 16-19, 2017**

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The Singhasari Resort, Batu City, Indonesia

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## **PREFACE**

It is my privilege to thanks to all of authors for your enthusiasm in participating and contributing papers at this 6<sup>th</sup> International Conference on Sustainable Animal Agriculture for Developing Countries (The 6<sup>th</sup> SAADC-2017) that had been successfully held on 16-19 October 2017 in The Singhasari Resort, Batu City, Indonesia with the theme of “*Wisdom of Using Local Resources for Development of Sustainable Animal Production in Developing Countries*”

The primary objective of the 6<sup>th</sup> SAADC-2017 was to provide a scientific forum for animal scientists and producers, and administrators of livestock related agencies, particularly from the developing countries, to share their experiences, discuss issues and suggest recommendations to develop further a more sustainable livestock production.

This proceeding contains selected papers that were presented in the conference based on the quality and relevancy to the confencence. The papers are reflecting responsiveness of animal scientist from various countries in promoting sustainability of animal agriculture for the prosperity of the never ending generations. These proceeding hopefully will certainly enrich the body of knowledge and understanding about various aspects related to sustainable animal agriculture.

Our special thanks are also for the SAADC President for his confidence to our Universitas Brawijaya to organize this prestigious conference. Also, congratulation that SAADC is now listed in the International Congress and Conference Association (ICCA) based on its quality and consistent activities.

We also wish to thank all partners and sponsors for their support to the success of the conference. To colleague members of the organizing committee, please accept my deep appreciation for your hard working in ensuring the success of the conference.

Yours Sincerely,

Prof. Ifar Subagiyo  
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## TABLE OF CONTENTS

<b>KEYNOTE ADDRESS AND INVITED SPEAKER</b>		
Keynote Address	<b>Making money from milk on small-holder dairy farms in the tropics: an international perspective</b> <i>P.C. Wynn, S.S. Godfrey, N. Aslam, H.S. Warriach, S. Tufail, M. Jahan, Z. Batool, B. Wang and D.M. McGill - Australia</i>	1
Invited Speaker	<b>Robust study design for animal production in developing countries</b> <i>Peter C. Thomson - Pakistan</i>	9
Invited Speaker	<b>Implementation of breeding programme for sustainable livestock production in tropical countries</b> <i>A.K. Thiruvankadan - India</i>	14
Invited Speaker	Symbiotic relationship and sustainable agriculture <i>K.G. Dande - India</i>	21
Invited Speaker	<b>Herd characteristic, feed resource and socioeconomic aspect of smallholder dairy farm in Lampang province, northern Thailand</b> <i>S. Wittayakun, W. Innaree, W. Chainetr and J. Lerdsri - Thailand</i>	27
Invited Speaker	Towards a cost-effective feeding of broiler chickens <i>Zulkifli Idrus - Malaysia</i>	31
<b>ORAL PRESENTATION</b>		
<b>Animal Production</b>		
AP – 107	Plasma leptin ghrelin and their expression of receptors in different tissues and on production performance during post summer period in PD 3 chicken line <i>Anand laxmi N., Reddy M.R, Raja Ravindra, Ramasubbaiah K., Pradeep Kumar E.R., Shanmugam M. and Mahapatra R.K</i>	36
AP – 108	Egg yolk cholesterol and serum metabolites of laying hens fed dried tomato ( <i>Solanum lycopersicum L</i> ) meal in diet <i>Leke .J., J. S.Mandey, F. Ratulangi , D. Rembet and S. E. Surtijono</i>	40
AP – 109	Carcass quality as well as composition and oxidative stability of the meat of crossbreds of Thai indigenous chickens and a layer breed as compared with purebred Thai indigenous, layer and broiler chickens <i>C. Kaewkot, M. Kreuzer and S. Jaturasitha</i>	43
AP – 110	Effect of genotype on productive and reproductive traits of Desert and Taggari goats managed under natural grazing during rainy season <i>I. Bushara., Hind, A. Salih., Mohamed, O. Mudalal Dafalla and M. Mekki</i>	47
AP – 112	Dairy cattle biogas unit sludge on the nutrient of rice straw compost <i>Mochammad Junus</i>	51
AP – 116	Effect of rice hull inclusion with and without enzymes on growth performance and digestive traits of broilers <i>Hartini, S., D.D. Rahardjo and P. Purwaningsih</i>	54
AP – 117	The effect of restricted feeding to reproductive performance on sexual maturity of quail ( <i>Coturnix coturnix japonica</i> ) <i>Rosa Tri Hertamawati, Suyadi, Edhy Soedjarwo and Osfar Sjoftjan</i>	58
AP – 120	Behaviour of imported brahman cross cows maintained by smallholder farmers <i>Tri Satya Mastuti Widi, Diah Tri Widayati, Sidiq Tri Pamungkas and Ulfadina Syahdianti</i>	61

AP – 121	Comparison of performance, incidence of foot pad dermatitis, and gut microflora of broiler chickens raised on floor pens and in cages in a tropical environment <i>M.S. Zulfahmi, N.N. Syafiqa, I. Zulkifli, E.A. Awad and A.F. Soleimani</i>	64
AP – 122	The effect of daylight transportation through body weight loss and physiology response between sheep and lambs <i>A. P. Hermanto, A. Prima, N. Luthfi and A. Purnomoadi</i>	67
AP – 127	The productivity of Kejobong and Bligon Goats, local Indonesian goats developed by farmers <i>I Gede Suparta Budisatria, Panjono, Ali Agus, and H.M.J. Udo</i>	71
AP – 130	Carcass characteristic of Bali bull on different ages <i>Kuswati, Lestari, T.J., Mahatvayoga, Y.A. and Nugroho, H</i>	75
AP – 133	Effect of time of first colostrums feeding on serum immunoglobulin concentration and body weight gain in Friesian Holstein calves <i>Tri Eko Susilorini, Pratiwi Trisunuwati and Rojaunaz Zulfa L</i>	78
AP – 134	Characteristics of goat farm based on farmer's profile and goat population in Senduro Village, Lumajang Regency, East Java, Indonesia <i>F.T. Saputra, P. Surjowardojo, and Irdaf</i>	81
AP – 136	Poultry industry and strategy for sustainable development to 2020 <i>Dau N.T and Thuy Linh N</i>	84
AP – 155	The nutritive value of feed for raising sheep in the southern border of Thailand <i>S. Jantararat, T. Kraiprom and A. Samae</i>	88
 <b>Animal Nutrition and Feed Technology</b>		
ANF – 201	Feeding microparticle protein-composed diet on protease activity and protein utilization in broiler chickens <i>N. Suthama and P.J. Wibawa</i>	91
ANF – 204	The biological quality of adding fermented cabbage waste as probiotic to pellet calf starter diet on calf performance <i>Mukodiningsih S., J. Achmadi, F. Wahyono, E. Pangestu and S.J. Ohh</i>	94
ANF – 205	Dietary inclusion of carrot ( <i>Daucus carota L</i> ) waste meal on performance and egg quality of laying hens after peak egg production <i>L.D. Mahfudz, W. Sarengat, and N. Suthama</i>	97
ANF – 206	Early feed restriction and <i>ad libitum</i> methods on broiler performance <i>N.G.A. Mulyantini and St.Y.F.G. Dillak</i>	100
ANF – 207	Evaluation of <i>in vitro</i> digestibility complete feed based on corncob as main feed formulation with different fermentation time <i>Sitti Wajizah, Muhammad Akbar Yusren, and Samadi</i>	103
ANF – 208	The effect of lempuyang ( <i>Zingiber zerumbet</i> ) in the organic feed towards nutritive contents of kampung chicken meat <i>Wahyu Widodo, Rahayu, I.D., and Sutanto, A.</i>	106
ANF – 209	Potential of bioactive compounds <i>Archidendron jiringa</i> by product to be natural feed additive for sustainable animal production <i>Nur Hidayah and Suliasih</i>	110
ANF – 210	Using durian seed ( <i>Durio zibethimus</i> ) to support living kampung chicken/KC in Indonesia villages <i>N. Ginting, L.D. Manalu, and B. Simanullang</i>	116

ANF – 211	Effect of inclusion of condensed tannin with differing molecular weight in diet rich in sunflower oil on ruminal pH and kinetics of gas production <i>in vitro</i> <i>A. Petlum, P. Paengkoum, J.B. Liang, K. Vasupen, and S. Paengkoum</i>	119
ANF - 212	The effect of substitution of groundnut cake by dried rumen content in ration for lamb fattening in Sudan <i>Amani A. B. Osman and Hyfaa A. Lief Mohammed Abass</i>	123
ANF – 213	Correlation between chewing time (eating and ruminating) and rumen pH change on lambs <i>Prima. A, F.D. Nugroho, E. Rianto, E. Purbowati and A. Purnomoadi</i>	133
ANF – 216	Fecal forensic tests as an indicator digestibility on young and mature sheep <i>C.P. Sari, A. Prima, N. Luthfi, V. Restritisnani, S. Dartosukarno, and A. Purnomoadi</i>	136
ANF – 220	Effect of vitamin A restriction on carcass traits and blood metabolites in Korean native steers <i>Dong-Qiao Peng, Jae-Sung Lee, Won-Seob Kim, Young-Shin Kim, Mun-Hee Bae, Yong-Ho Jo, Young-Kun Oh, Youl-Chang Baek, Seong-Gu Hwang and Hong-Gu Lee</i>	139
ANF – 221	Stimulation of chewing activity of ewes by feeding spent mushroom substrates containing long-cut sweetcorn stover <i>Katsuki Koh, Sayaka Kurata and Chikao Hiramori</i>	143
ANF – 224	Response to tropical leaves for potential trend of total gas production <i>in vitro</i> in Saanen goats <i>R.A.P. Purba, P. Paengkoum, and S. Paengkoum</i>	146
ANF – 225	Buckwheat phytase activity: <i>In vivo</i> prediction of production performance and phytate phosphorus utilization in laying hens <i>Rakhi Chowdhury and Katsuki Koh</i>	149
ANF – 226	Effects of dietary $\beta$ -1,4-mannobiose on the growth performance and productivity of Hinai-jidori chicken slow-growing Japanese meat-type chicken <i>K Rikimaru, D Aoya, Y Sato, K Fukui, M Ibuki, T Saneyasu, K Honda, and H Kamisoyama</i>	152
ANF – 229	Effects of different molecular weight tannin in roughage on <i>in vitro</i> gas production technique <i>Taethaisong, N. and P. Paengkoum</i>	155
ANF – 230	Effect of <i>Pleurotus species</i> pretreatment of lignocellulose on a reduction in lignin and the biodegradation of rice stubble <i>Vorlaphim, T., S. Paengkoum, C. Yaungklang, and P. Paengkoum</i>	158
ANF – 231	Early evaluation of 65th days after sowing bmr sorghum productivity grown on swamp soil applied with different levels of Biochar <i>Widhi Kurniawan, Hamdan Has, and Rahman</i>	161
ANF – 232	Use of live yeast culture microbial as a co-active in the rumen on gas kinetic by using <i>in vitro</i> gas production technique <i>Wilachai K., K. Poonsuk, and P. Paengkoum</i>	165
ANF – 233	Forage yield and nutrients quality of sticky and purple corn stover <i>Xingzhou Tian, Pramote Paengkoum, Sirinthip Traiyakun, and Siwaporn Paengkoum</i>	169

ANF – 234	Effects of aflatoxin levels in the diet on aflatoxins residues in the liver, meat, and egg of laying duck <i>I. Sumantri, A. Agus, B. Irawan, and Herliani</i>	172
ANF – 235	Enrichment of feedstuff with fermented soybean peel to increase rabbit body weight <i>Sri Minarti, Endang Setyowati, Sri Kumalaningsih, and Tatik Wardiyati</i>	175
ANF – 236	Influence of feed particle size on performance and gastrointestinal tract measurement of broilers from one to twenty-eight days of age <i>I. Nursiam, M. Ridla, and W. Hermana</i>	181
ANF – 239	Hydroponic corn fodder, a potentially sustainable feed alternative to maintain feed intake of <i>Bos sondaicus</i> bulls during long transportation <i>C.L.O. Leo-Penu, D.R. Tulle, U.R. Raya, I.G.N. Jelantik, I. Benu, and A.J. Parker</i>	184
ANF – 240	Forage yield and nutrients quality of sticky and purple corn stover <i>Xingzhou Tian, Pramote Paengkoum, Sirinthip Traiyakun, and Siwaporn Paengkoum</i>	187
ANF – 242	Effect of molasses and iron (II) sulfate on fermentation and anthocyanin stability of anthocyanin-rich Napier Grass silage in <i>in vitro</i> <i>Ngo Thi Minh Suong, Pramote Paengkoum, and Suwiporn Paengkoum</i>	294
ANF – 243	Effect of probiotic containing <i>Enterobacter sp.</i> , <i>Bacillus sp.</i> , <i>Cellulomonas spp.</i> , <i>Actinomyces spp.</i> supplementation on the laying performance and egg cholesterol of quail ( <i>Coturnix coturnix japonica</i> ) <i>W. P. Lokapirnasari, A.R. Dewi, A. Fathinah, S. Hidanah, N. Harijani, and Soeharsono</i>	200
ANF – 245	<i>In vitro</i> cultures of inulin from chicory on the abundance of calve fecal microbial populations by real – time PCR <i>K. Kamkajon, P. Paengkoum, S. Paengkoum, and Z. Yu</i>	204
ANF – 247	Effect of a mixture of jackfruit peel ( <i>Artocarpus heterophyllus</i> ) and manure fermented by using <i>Aspergillus oryzae</i> on NH <sub>3</sub> , VFA concentration and estimated ME, NE, OMD and MP values <i>in vitro</i> <i>Mashudi, Kusmartono, and I. Wijaya</i>	208
ANF – 249	Optimization of enzymatic hydrolysis of palm kernel expeller and its effect on broiler's growth performance <i>Wei Li Chen, Mohammad Fasaleh Jahromi, Norhani Abdullah Zulkifli Idrus, and Juan Boo Liang</i>	211
ANF – 250	The correlation between protein and fat in meat with protein intake of local lambs <i>R. Kussetiyawan, A. Prima, N. Luthfi, M. Arifin, C. M. Lestari, and A. Purnomoadi</i>	214
ANF – 252	Effects of oil palm leaflets in total mixed ration on nitrogen utilization, rumen fermentation and growth in goats <i>B. Khamseekhiew, O. Pimpa, P. Nakaviroj, and T. Jettana</i>	217
ANF – 255	The proximate analysis and <i>in vitro</i> gas production of some types of waste paper <i>Mohmed E. Elimam and Farha E. Daffa Alla</i>	221
ANF – 256	Physical and chemical qualities of dwarf elephant grass <i>Pennisetum purpureum</i> cv Mott silage <i>Irsyammawati, A., I. Subagiyo, M.C.C.D Sahanaya, and G. Wibisono</i>	225

ANF – 257	Nutrient composition, tannin concentration and fibre component of tea leaf ( <i>Camellia sinensis</i> , L.) as <i>Attacus atlas</i> (L.) larval feed <i>Anita S. Tjakradidjaja, Wibowo Mangunwardoyo, Asnath M. Fuah, and Andi Salamah</i>	228
ANF – 265	<i>Mitsuokella jalaludinii</i> supplementation improved nutrient utilization of broilers fed low available phosphorous diet <i>Hooi Chia Tang, Chin Chin Sieo, Norhani Abdullah, Chun Wie Chong, Abdul Rahman Omar, Rosfarizan Mohamad, and Yin Wan Ho</i>	233
ANF – 268	The effects of feeding flavonoids compounds from Iranian propolis extracts to Holstein milk production and quality <i>Sh. Ehtesham, A. R. Vakili, and M. Danesh Mesgaran</i>	236
ANF – 269	Effect of synbiotic meal on <i>Salmonella sp.</i> , <i>Escherichia coli</i> , and lactic acid bacteria population of broiler <i>Syaiful Haq Baderuddin, Ilham Adiansah, Ardhi Yusuf Bachtiar, Kholifatus Soliha, Osfar Sjoftjan, and Eka Wulandari</i>	239
ANF – 270	Response to differential native asian leaves for trend of total gas production <i>in vitro</i> in Saanen goats <i>R. A. P. Purba and P. Paengkoum</i>	242
ANF – 272	Organoleptic characteristics of eggs produced by local hens fed diets containing cakalang ( <i>Katsuwonus pelamis</i> L) fish oil waste <i>Leke J.R., J.T. Laihad, R. Tinangon, L. Tangkau, J. Mandey, and G.D. Rembet</i>	247
ANF – 274	Effect of prebiotic and Immunowall® as feed additive in enzyme activity, intestinal characteristic, and broiler performance <i>O. Sjoftjan, E. Widodo, and H.M Natsir</i>	250
ANF – 276	Enrichment of omega-3 long chain fatty acids into the egg yolk of Mojosari ducks through dietary fish oil and tomato powder supplementation <i>F. Andri, E. Widodo, and I.H. Djunaidi</i>	256
ANF – 279	Corn straw based on complete feed silage quality with adding various legumes <i>Subagiyo, I., S. Chuzaemi, H. Sudarwati, A. Irsyammawati, and Marjuki</i>	259
ANF – 280	<i>In vitro</i> digestibility and NH <sub>3</sub> concentration rice straw based on complete feed silage with inclusion of various legumes <i>S. Chuzaemi, I. Subagiyo, H. Sudarwati, A. Irsyammawati, and Marjuki</i>	262
ANF – 285	Effect of addition either probiotic or encapsulated in feed on intestinal microflora population of local duck <i>Ilham Ardiansah, Yamasuhu Ahmad, Kholifatus Sholiha, Artita Wahyudia Safitri, Nurlayla Wijayanti and Osfar Sjoftjan</i>	265
ANF – 287	Fatty acid profile, omega 3, 6, 9 content and ratio PUFA, MUFA dan SFA Trevally ( <i>Selaroides sp</i> ) fish oil with the addition of basil leaf powder ( <i>Ocimum bacilicum</i> ) as an antioxidant <i>Minarny Gobel, Anita Trinawati, Hendriyanto, Steven Yoputra, and Fahrur</i>	268
ANF – 288	Crop by-product preservation for cattle production in Central Vietnam <i>Vo Thi Kim Thanh, V.B.C Nguyen, and Nguyen Vu Trong Thi</i>	271
ANF – 290	Effects of partial corn replacement by palm kernel meal with different enzyme forms on performance of broilers <i>Muhammad Halim Natsir, Irfan H. Djunaidi, Osfar Sjoftjan, Antonius Suwanto, Esti Puspitasari, and Ludovika Jessica Virginia</i>	275

### Animal Genetic and Breeding

- AGB – 302 Estimation of birth weight repeatability and producing ability in Friesian Holstein crossbred cow 278  
*Maylinda S., L. Hakim and Luju M.T.*
- AGB – 303 Comparison of morphological characteristics male Saburai Goat on two breeding location in the Tanggamus Regency Lampung Province 282  
*M. Dima Iqbal Hamdani, Kusuma Adhianto, Sulastri, Muhtarudin, and Ambya Imammuddin*
- AGB – 304 Phylogenetic analysis of Gayo Horse breed through mitochondrial D-loop region 285  
*Eka Meutia Sari, Muhammad Hambal, M. Yunus and Eryk Andreas*
- AGB – 306 Improvement of egg production performance due to selection on 3 months cumulative egg production for 4 generations on Mojosari duck 290  
*I.M.U. Abrianto, L. Hakim, and V.M.A. Nurgiartiningasih*
- AGB – 312 Dendogram of Indonesian local Ettawah Goats in three villages of Sumenep Madura East Java 294  
*Mudawamah Mudawamah, M. Zainul Fadl, Usman Ali, and Gatot Ciptadi*
- AGB – 314 The phenotypic analysis and population structure of male Senduro Goat breed at Lumajang Regency East Java Indonesia 297  
*Gatot Ciptadi, Ardyah I. Putri, Sri Rahayu, Sri Wahyuningsih, Moch. Nasich, M. Mudawamah and Agus Budiarto*
- AGB – 316 *Thyroglobulin* and  $\mu$ -*calpain* genes effect on marbling and meat tenderness in experimental crossbred beef cattle 300  
*Taweeporn Raungprim, Wisut Maitreejet, Sutisa Majarune, Sukanya Rattanatabtimtong and Nachai Sarataphan*
- AGB – 318 Two maternal lineages revealed by mitochondrial D-loop DNA in Thai dwarf swamp buffaloes (*Bubalus b. carabanensis*) 305  
*Taweeporn Raungprim, Wisut Maitreejet, Sutisa Majarune, Kongpatom Karnjanasirm, Sukanya Rattanatabtimtong, Thuchadaporn Chaikhun-Marcou and Nachai Sarataphan*

### Animal Reproduction

- AR – 401 The quality of Garut's fighting-ram's frozen semen in a tris –extender supplemented with various concentrations of raffinose 310  
*Herdis, Maman Surachman, I Wayan Angga D, Santoso and M Rizal*
- AR – 402 The differences time between estrous with implementation of artificial insemination on Brahman Cross cow conception rate 314  
*Trinil Susilawati, Fakhri Alfi Annashru, M. Nur Ihsan and Aulia Puspita Anugra Yekti*
- AR – 404 Effect of addition of fish oil to the extender on the semen quality before freezing on Bali bull Spermatozoa 317  
*Abdul Malik*
- AR – 406 Changes in follicular dynamics and hormonal concentrations following administration of pregnant mare's serum gonadotropin in addition to 7-day progesterone-based synchronisation protocol in Thai native beef cows (*Bos indicus*) 320  
*J. Jitjumnong, T. Moonmanee, P. Yama and W. Karaphuak*

AR – 407	Efficiency of lyophilized tris egg yolk extender on bull semen cryopreservation <i>Kajaysri, J., U. Rungroekrit, S. Ruenphet and C. Chapanya</i>	323
AR – 408	The effect of egg plant ( <i>Solanum melongena</i> ) peel extracts level in skim milk on sperm quality of Bali bull culled semen at room temperature <i>Nurul Isnaini and Yekti A.P.A</i>	326
AR – 409	Differences in locational relationship between corpus luteum and ovulatory follicle changes on follicular dynamics and progesterone concentrations of Thai indigenous cows ( <i>Bos indicus</i> ) exhibiting 2 follicular waves <i>P. Yama, T. Moonmanee, M. Osathanunkul, J. Jitjumnong, and W. Karaphuak</i>	329
AR – 411	Estrous profile of Etawah crossbreed goats after estrous synchronization with different method <i>Nurcholidah Solihati, Siti Darodjah Rasad, and Anindita Mahendra</i>	332
AR – 413	Impact of management on calving interval and progesterone level in she-camels' milk in central Sudan <i>Idris A.O. Bakheit S. A. and Bushara I.</i>	337
AR – 416	Morphometric and Viability Epididymal Sperms of Swamp Buffalo ( <i>bubalus bubalis</i> ) <i>Jaswandi and Harissatria</i>	342
AR – 421	Exploration of quality frozen cement in Aceh cattle through observation microscopically <i>Cut Intan Novita, Eka Meutia Sari and Muhammad Ammar</i>	346
AR – 422	Reproductive characteristics of gayo buffalo in Linge District of Central Aceh <i>Moh Agus Nashri Abdullah, Eka Meutia Sari and Alkautsar</i>	349
<b>Animal Product Technology</b>		
APT – 503	Gelatin quality from Ongole crossbred (PO) and Madura cattle hides using HCl and NaOH curing <i>Dedes Amertaningtyas, Yuny Erwanto, Zaenal Bachrudin and Jamhari</i>	352
APT – 504	Goat milk kefir increases the phagocytosis activity of peritoneal macrophages in diabetic rat <i>Istini, Dwiwati Pujimulyani, and Nurliyani</i>	355
APT – 506	Antioxidant activity on fermented beverages combined from milk kefir whey and honey <i>Firman Jaya, Imam Thohari, Kuswati, Tri Eko Susilorini, Herly Evanuarini, and Khafsah Maulida Permata Sari</i>	359
APT – 507	Improving the Indonesian meatball quality using different rice bran varieties of Jombang and Kediri, East Java as natural antioxidant <i>Kartikawati M and Purnomo H</i>	363
APT – 509	Quality and marketing distribution of milk products from D-farm milk processing unit, Faculty of Animal Science, Bogor Agricultural University in Bogor Region, West Java Province, Indonesia <i>Irma Isnafia Arief, Zakiah Wulandari, M. Sriduresta Soenarno, Devi Murtini and Dwi Febriantini</i>	369
APT – 512	The use of coconut ( <i>Cocos nucifera L</i> ) flesh and water to improve the physicochemical properties of palm sugar syrup <i>Susilowati S, Kusuma Wardani A. and Purnomo H</i>	372

APT – 514	Substitution of Red Bean Flour ( <i>Phaseolus vulgaris L</i> ) on Chicken Meatball Herly Evanuarini, Agus Susilo and Alief Rahmania Safitri	376
APT – 515	Quality of goat bone gelatin reviewed from protein content, molecular weight, water holding capacity, viscosity and gel strength <i>Mustakim, E. S. Widyastuti, A. Susilo, I. Thohari and A. S. Widati</i>	380
APT – 519	Effects of restraining method with or without stunning on the physicochemical properties of broiler breast and thigh muscles <i>Siti Nadirah Ismail, Awis Qurni Sazili, Zulkifli Idrus, Goh Yong Meng, Elmutaz Atta Awad, Nur Afzanisa Mohd Zulkifli</i>	383
APT – 520	The effect of kolang-kaling ( <i>Arenga pinnata</i> ) addition on characteristics of beverage Kefir <i>A.Yelnetty, R. Hadju and M. Tamasoleng</i>	387
APT – 523	Preparation and characterization of protein extracted from beef heart by acid solubilization isoelectric precipitation <i>Khothibul Umam Al Awwaly, Yuny Erwanto, Wayan T. Artama, and Rusman</i>	390
<b>Socioeconomic and Animal Production System</b>		
SE – 703	Level adoption of artificial insemination (AI) and this relationship with the social economic smallholder business livestock <i>Riyanto, J., Lutojo, A. I. Sari and E. Yuniati</i>	393
SE – 704	The roles of dairy farmer group in the empowerment of conservation farming in the Kaligarang sub-upstream watershed <i>W. Sumekar, I.P. Sirappa, Sunarso and Sumarsono</i>	396
SE – 705	Carrying capacity index of cattle feed on coconut land in District of West Bolangitang <i>Artise H.S. Salendu, Ingriet D.R. Lumenta, H.O. Gijoh, and F.H. Elly</i>	399
SE – 706	Forage introduction to support development of cattle In Sangkub District <i>Femi H. Elly, A.H.S. Salendu, Ch. L. Kaunang, Indriana, R. Pomolango and Syarifuddin</i>	402
SE – 710	The socio-economic creativity effect of livestock operations on dual production geographically under small-scale peasant In Weda, Halmahera, Indonesia <i>J C Loing, A Aiba, B Rorimpandey, and L Kalangi</i>	405
SE – 712	Potency of forage development under coconut tree in District of Lolak <i>A.H.S Salendu, I.D.R. Lumenta, F.H. Elly and F.S.G. Oley</i>	409
SE – 715	Production performance of Simental and Limosuin Ongole Crossbred on the smallholder business livestock <i>Riyanto, J., Lutojo, and D. N. Haryati</i>	412
SE – 718	Accessibility of farmers toward resources of broiler livestock farming with use partnership system in Malang Regency <i>Amam, Zaenal Fanani, Budi Hartono, Bambang Ali Nugroho</i>	415
SE – 719	Utilization of signal grass pasture to support cattle production and economic value of coconut based farming <i>David A. Kaligis, Selvie D. Anis, P. Waleleng, F. Oroh and S. Dalie</i>	421
SE – 722	Labor allocation for beef cattle breeding on dry-land area in South Malang region <i>J. A. Putritamara, Z. Fanani, and N. Febrianto</i>	424

SE – 723	Characteristic and right of consumer to satisfaction of dendeng sapi using regression method <i>S. Zubaidah, Z. Fanani, B. Hartono, L.E. Radiati and T.M. Nur</i>	427
SE – 724	Impacts of improved extension services on awareness, knowledge, adoption rates and farm productivity of smallholder dairy farmers in Pakistan <i>Hassan Mahmood Warriach, David Michael McGill, Muhammad Ishaq, Shumaila Arif, Sajid Latif, Azhar Bhatti, Aijaz Kumbher, Zahra Batool, Sobia Majeed, Russell David Bush, Talat Naseer Pasha and Peter Charles Wynn</i>	430
SE – 725	Cost effectiveness and effect of buffalo and cow milk feeding on growth performance of pre-weaned buffalo calves <i>Khizer Hayat, Hassan Mahmood Warriach, Muhammad Ishaq, Sajid Latif, Azhar Bhatti, Aijaz Kumbher, Shumaila Arif, Zahra Batool, Sobia Majeed, Peter Campbell Thompson and Peter Charles Wynn</i>	434
SE – 726	Impact of dairy extension training on knowledge, communication skills and self-confidence of livestock extension workers in Pakistan <i>Abdul Aziz, Hassan Mahmood Warriach, Muhammad Ishaq, Sajid Latif, Azhar Bhatti, Aijaz Kumbher, Shumaila Arif, Zahra Batool, Sobia Majeed Peter Campbell Thompson and Peter Charles Wynn</i>	437
SE – 727	Productive and reproductive performance of buffaloes under smallholder production system in Pakistan <i>Sobia Majeed, Hassan Mahmood Warriach, David Michael McGill, Aijaz Kumbher, Peter Campbell Thompson, Talat Naseer Pasha and Peter Charles Wynn</i>	440
SE – 730	Characteristic of dairy farmers as the member of pujan milk cooperative Malang East Java Indonesia <i>N. Febrianto, J.A Putritamara, and Z. Fanani</i>	443
SE – 731	Study of marketing campaign model to increase egg consumption <i>Suci Paramitasari Syahlani, MujtahidahAnggriani Muzayyanah, F. Trisakti Haryadi, and Sudi Nurtini</i>	446
SE – 733	Economic assessment of the native honeybee farming (Case study at Kediri regency East Java of Indonesia) <i>H.D. Utami , M.I. Al-Ayubi and A.P. Seruni</i>	450
<b>Veterinary</b>		
VE – 801	Antibacterial and antifungal activities of <i>Muntinga calabura</i> leaves extract as alternative to antibiotic in mastitis treatment <i>Dian Wahyu Harjanti, Rizke Ciptaningtyas, Fajar Wahyono and Enny Tantini Setiatin</i>	454
VE – 805	Factors influencing the incidence of <i>Eimeria leuckarti</i> in horses <i>Rehman, T., R.Z. Abbas, W. Babar, R. Hussain A. Sikandar and M.A. Zaman</i>	457
VE – 807	Longitudinal humoral immune response comparison between high and low Newcastle disease virus titer of in house inactivated vaccine using single vaccination in layer chicken <i>Sorawot Sonthipet, Tassanee Trairatapiwan, Rachakris Lertpatarakomol and Sakchai Ruenphet</i>	460

VE – 808	Studies on <i>Escherichia coli</i> and <i>Salmonella</i> Infantis inactivation using slaked lime and food additive calcium hydroxide <i>Tassanee Trairatapiwan, Kornkamon Paditporn, Kansiri Phimwapee, Kazuaki Takehara and Sakchai Ruenphet</i>	463
VE – 810	The Concentration of serum proteins, albumin, globulin and A/G ratio in calves and Adult Friesian Holstein <i>Sus Derthi Widhyari and Anita Esfandiari</i>	467
VE – 811	Production of IgG against avian influenza from bovine colostrum to control bird flu infection <i>A. Esfandiari, I WT. Wibawan, S. Murtini, SD. Widhyari, and B. Febram</i>	470
VE – 812	Acute phase proteins as early biomarkers in buffaloes infected with <i>Pasteurella multocida</i> type B: 2 and its Immunogens (LPS and OMP) <i>Eric Lim Teik Chung, Faez Firdaus Jesse Abdullah, Ali Dhiaa Marza, Hayder Hamzah Ibrahim, Mohd Zamri-Saad, Abdul Wahid Haron, Mohd Azmi Mohd Lila, and Abdul Aziz Saharee</i>	473
VE – 813	Research experience animal model potential of <i>Lactobacillus bulgaricus</i> to prevent against livestock aflatoxicosis based on clinical pathology on hepatic malondialdehyde (MDA) and blood triglycerides (TG) <i>Pratiwi Trisunuwati, Rositawati Indrati, and Natasha Kartini Puspitasari</i>	478
VE – 815	Efficacy maternal antibody (IgG) transfer to protect against infectious diarrhea on 1 <sup>st</sup> week post natal calves <i>Trisunuwati. P, Susilorini T. and Maulana I.</i>	482
VE – 817	Benthic foraminifera as bio-indicators of estuarine environment: a pilot study from Quang Tri province, Vietnam <i>Nguyen Vu Bao Chi, A. Sabbatini, A. Negri, M. Sarti, Nguyen Ngoc Phuoc, Nguyen Duc Thanh, and Ha Nam Thang</i>	485

## POSTER PRESENTATION

### Animal Production

AP – 106	Effect of Papaya Leaf ( <i>Carica papaya</i> L.) on Gold and Silver Arab Chicken Egg Production and Quality <i>Muharlieni, Suyadi, V.M. A. Nurgiartiningsih and O. Sjoftan</i>	488
AP – 118	Expression of stearoyl-CoA desaturase (SCD) gene and mono-unsaturated fatty acids content in goat and sheep fed high concentrate diet <i>Candyrine S.C.L., M.F. Jahromi, M. Ebrahimi, N. Abdullah, Y.M. Goh, and J.B. Liang</i>	491
AP – 125	Exterior characteristics of female Gembrong Goat in Karangasem, Bali <i>Bayu Andri Atmoko, I Gede Suparta Budisatria, Sigit Bintara, Dyah Maharani and I Made Londra</i>	494

### Animal Nutrition and Feed Technology

ANF – 218	Effect of high energy feed source on <i>in vitro</i> ruminal fermentation and <i>in situ</i> digestibility <i>Chaehwa Ryu, Eunjeong Jeon, Myungsun Park, Do-Hyeong Lee, Sangbuem Cho, and Nag-Jin Choi</i>	498
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ANF – 227	Effect of feed additive supplementation on reduction of heat stress of Holstein dairy cow and broiler during summer season <i>Sanghoon Yeom, Namhyeong Kim, Eunjeong Jeon, Myungsun Park, Chaehwa Ryu, Nag-Jin Choi, and Sangbuem Cho</i>	501
ANF – 259	Feed supplementation for dairy cattle by using multi nutrient feed supplement without molasses (MFSWM) <i>Suharyono, Shintia N.W.H, Tri Mahawijaya Herlambang, Asih Kurniawati, and Adiarto</i>	504
ANF – 262	Nutritive value of botanical fraction in maize by-products from various varieties <i>Endang Sutedi and Budi Utomo</i>	507
ANF – 263	Used dried cassava leaves with enzymes from fermented tomato pomace with <i>Aspergillus niger</i> in laying duck diet on nutrient digestibility <i>Kraisit Vasupen, Savang Saykhammy, Sasiphan Wongsuthavas, Chalermpon Yuangklang, Smerjai Bureenok, and Benya Saenmahayak</i>	511
<b>Animal Genetic and Breeding</b>		
AGB – 310	Study on a polymorphism in the promoter region of the SIRT1 gene in Agerolese cattle breed <i>Selvaggi, M., C. Carbonara, F. Ciotola, S. Albarella, G. Aiudi, V. Tufarelli and C. Dario</i>	514
AGB – 311	Analysis of a polymorphism at STAT5A gene in Agerolese cattle breed <i>Selvaggi, M., F. Ciotola, S. Albarella, M. Ragni, V. Tufarelli and C. Dario</i>	517
<b>Animal Reproduction</b>		
AR – 415	Levelled-container: a new utility for determining the testicular volume in small ruminants <i>M.F. Harighi, H. Wahid, F.F.A. Jesse, P.C. Thomson, and M.Y. Rafii</i>	521
<b>Socioeconomic and Animal Production System</b>		
SE – 713	Analysis of technical, economic, and allocative efficiency and factors affecting beef cattle business profit (A case study in Tumpang Sub-district, Malang Regency) <i>Umi Wisapti Ningsih, Budi Hartono, Bambang Ali Nugroho and Hari Dwi Utami</i>	524
<b>Veterinary</b>		
VE – 802	Bovine respiratory syncytial virus and bovine viral diarrhea virus antibodies – detection and effect to milk composition in dairy cattle <i>Lopez, B. M., T. H. Kim, C. W. Song, S. M. Lee and K. S. Seo</i>	527

## **Plasma leptin ghrelin and their expression of receptors in different tissues and on production performance during post summer period in PD 3 chicken line**

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### **Abstract**

During summer high ambient temperature prevailing in the environment or in the shed, has a significant negative effect on the physiological functions of the chicken. PD 3 chicken layer line was developed at this institute from Dehlam breed. Despite good management practices, the temperature in the shed was higher (36.9-29°C) than the temperature which should be present in the thermoneutral zone (20-26°C) during eight weeks of summer period. The following experiment was conducted, to observe the effect of supplementation of fermented yeast culture (*Saccharomyces cerevisiae*)  $1.5 \times 10^7$  cfu/g, (FYC, commercial product) on certain physiological blood parameters and mRNA expression of genes for receptors.

*Keywords: summer, PD3 chicken line, hormone, receptors, fermented yeast culture*

### **Introduction**

During growth phase, chickens have higher metabolic activity (Freitas et al., 2014), and stress experienced during summer will be more. The stress experienced during growth phase may have an impact on egg production and feed efficiency in the later part of the season coinciding with the laying period. These are the two important parameters which govern the economics of the producer. Heat stress also leads to cellular oxidative stress, which causes damage to cell membranes. Leptin, probably because of its sensitivity to heat stress, it is suggested that Leptin plays a key role in regulation of energy metabolism under heat stress conditions (Morera et al., 2012). Fermented yeast culture used in the present study, is a commercial product composed of yeast and the media on which it is grown and is a source of vitamin, amino acids etc.

### **Methodology**

The duration of the summer period was for eight weeks / 56 d (Age of the birds- 17-24 weeks). The study during post summer period extended from 25th week to 32 weeks of the age of the birds. A total number of 150 birds were divided equally in to three groups. Supplementation of FYC was given along with the basal diet, @ of 0.5g/kg (T1) and 1.25g/kg (T2) respectively to the two experimental groups and the control group was offered feed devoid of FYC. Feed intake and body weight were recorded at 15d interval, whereas Leptin and Ghrelin hormones were estimated by enzyme immunoassay using commercial EIA kits. in the blood samples collected at 15d interval. For assay of hormone receptors, total RNA was extracted, converted to cDNA and was amplified with respective primers. Estimation of plasma

## **Carcass quality as well as composition and oxidative stability of the meat of crossbreds of Thai indigenous chickens and a layer breed as compared with purebred Thai indigenous, layer and broiler chickens**

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### **Abstract**

It was investigated whether crossbreeding of Thai Native chickens with a layer chicken type improves carcass and meat quality in comparison to the respective purebred types and a commercial broiler type. Two-hundred 1-day old birds, 50 each of Pradu Hang Dam )Thai indigenous; PA(, Rhode Island Red )RR(, crossbred )CB = PA×RR(, and broiler )Ross; BR( were kept in 20 pens per ten chickens. Birds were slaughtered either after 120 days (PA, CB and RR) or 45 days (BR). Body and carcass weight and breast proportion were highest for BR and lowest for PA and RR ) $P > 0.05$ ), and intermediate with CB. The PA, CB and RR chickens had a higher leg proportion than BR ) $P > 0.05$ (. The RR had most abdominal fat ) $P > 0.05$ (. The breast meat of BR had the highest ) $P > 0.05$ ( intramuscular fat content, whereas the protein content of PA, CB and RR was higher than in BR ) $P > 0.05$ (. The content of malondialdehyde was higher ) $P > 0.05$ ( in breast meat of BR when compared with RR, CB and PA from day 3 of storage onwards. In conclusion, crossbreeding was beneficial with respect to carcass traits, even though the advantage over the pure lines was small compared with the difference to the commercial broilers. In the meat quality traits, inclusive of oxidative stability, crossbreds did not differ from the pure lines, but all extensive types were superior to broilers in this trait.

*Keywords: meat quality, lipid oxidation, pradu hang dam, rhode island red*

### **Introduction**

Among the factors influencing growth, carcass and meat quality of growing chickens, such as genetics, nutrition, and husbandry, genetics is the most important factor. Chicken meat is a very popularly commodity in Thailand and it originates from fast-growing broilers, crossbreds or native chickens )Jaturasitha et al., 2016( Commonly, the crossbreds also have Thai native chicken as one parent in order to preserve its preferred black color, which is a dominant trait. Recently, Thai native chickens were becoming more popular among Thai consumers due to their chewy and tasty meat )Jaturasitha et al., 2008(. However, comparisons between crossbreds and pure lines are limited. Therefore, the objective of this study is to compare crossbreds in growth, carcass and meat quality with pure lines of Thai indigenous chickens and a layer type as well as with fast-growing broilers.

### **Methodology**

An experiment was carried out with a total of 200 chickens kept in pens of ten each. Treatments with 50 birds each were Pradu Hang Dam )a representative of Thai indigenous

## **Effect of genotype on productive and reproductive traits of desert and taggari goats managed under natural grazing during rainy season**

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### **Abstract**

The productive and reproductive performance of Sudanese Desert and Taggari goats has been studied during rainy season of South Kordofan state, Sudan. About Thirty five male and female Sudan Desert and Taggari goat kids were used in this experiment. The result inducted that birth weight, growth rate at different ages, pre-weaning average daily weight gain of kids, weaning weight, body weight and age at puberty and body weight at first kidding was significantly ( $p < 0.01$ ) affected by breed. Desert kids showed better birth weight ( $2.45 \pm 0.07$  vs  $1.95 \pm 0.04$  kg) and weaning weight ( $10.84 \pm 0.34$  vs  $8.44 \pm 0.19$  kg) than Taggari kids. The result revealed that Desert kids have heavier ( $p < 0.01$ ) body weight at puberty ( $23.09 \pm 0.44$  kg) but exhibit longer time to show first estrus ( $242.57 \pm 4.97$  day) compared with Taggari kids with  $18.59 \pm 0.34$  kg for body weight and  $211.34 \pm 5.48$  day for days to puberty. Body weight at first kidding was significantly ( $p < 0.05$ ) larger for Desert kids ( $377.70 \pm 12.12$  kg) than Taggari kids ( $384.33 \pm 6.51$  kg), but age at first kidding was not affected by breed. In conclusion the investigated breed showed different body weight changes at different ages which affect reproductive and productive traits of the Taggari and desert goats under rangeland system during rainy season.

*Keywords: desert, Taggari kids, breed, genotype, Sudan, performance*

### **Introduction**

Goats are widely distributed around the world with high demand for their meat in many developing and subtropical countries and arid regions (Casey et al., 2003). In most of these countries, the productivity of goats is below their potential (Matossian de Pardos, 2000). Goats are neglected animals in Sudan despite the fact that they play a very important role in the rural economy and provide many poor urban and rural families with milk and meat. Sudan has two breeds of meat goat, they were the Sudanese Desert and Taggari goats. Indigenous goat breeds are well adapted to semi arid tropical conditions, with a high degree of heat tolerance and are partly resistant to many of the diseases prevailing in the semi arid areas, not to mention their ability to survive long periods of feed and water shortage (Bushara et al. 2011).

Birth weight and the growth of kids until weaning, together with reproduction birth characteristics, dressing percentage, meat quality are reliable indicators of the breed efficiency in the production of meat (Sundaram et al. 2012). Comparative evaluations of meat goat breeds for pre-weaning kid performance had received inadequate research attention in the Sudan. A high rate of reproductive efficiency is generally thought to be the most important prerequisite for the production of meat (Herold et al. 2007), therefore an assessment of the general reproductive characteristics of native breeds is necessary prior to developing strategies aimed at improving meat supplies. Studies conducted by various authors reflected the facts that grazing alone may not be sufficient for optimum live weight gain and reproductive performance

## **Comparison of performance, incidence of foot pad dermatitis, and gut microflora of broiler chickens raised on floor pens and in cages in a tropical environment**

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### **Abstract**

This study was conducted to determine the effects of cage and floor pen rearing systems on growth performance, incidence of footpad dermatitis (FPD), and cecal *E. coli* population in broiler chickens in a tropical environment. A total of 200 day-old male broiler chicks (Cobb 500) were equally allocated to either battery cages with wire floors (CG) or floor pens with wood shavings as litter (FP) from day 1 to 42. The body weight and feed intake of CG broilers were significantly lower than those on floor pens. However, the CG broilers had significantly better feed conversion ratios than their FP counterparts. The incidence of FPD and cecal *E. coli* population were higher in FP birds than those of the CG group which suggest poorer welfare in the former.

*Keywords: rearing system, broiler chickens, growth performance, foot pad dermatitis and gut microflora*

### **Introduction**

Floor pens and battery cages are common rearing systems for commercial broiler chicken production worldwide. Each system is associated with some drawbacks which may influence productivity, health, or welfare of broilers (Wang et al., 2015). Questions have frequently been raised about the welfare of cage-reared chickens (Duncan, 2001). Overcrowding, movement of restriction and the lack of exercise are welfare concerns that are associated with cage rearing system. However, separating broilers from their feces reduced the occurrence of diseases (Al-Bahouh et al., 2012) and stands as a welfare benefit (Duncan, 2001). Earlier work comparing broilers raised in cages and floor pens were conducted under temperate conditions. In a hot tropical environment, chickens tend to drink more to alleviate heat stress. Consequently, more water will be excreted through droppings, which in turn will result in wet litter problem. Wet litter may increase obnoxious odor coming from ammonia and bacterial action in the droppings and this may increase susceptibility to respiratory diseases, contact dermatitis, and leg weakness (de Jong et al., 2014). Thus, this study was conducted to compare the growth performance, cecal *E. coli* population, and incidence of footpad dermatitis in broiler chickens reared in cages and floor pens in a tropical environment.

### **Methodology**

A total of 200 day-old male broiler chicks (Cobb 500) were obtained from a commercial hatchery. Upon arrival (day 1), the chicks were equally assigned to either cages (CG) (10 replicates) with wire floors or floor pens (FP) (10 replicates) in a conventional, open-sided house. The floor space allowed for both CG and FP birds was 0.1 m<sup>2</sup> per bird. Birds were fed



# CERTIFICATE

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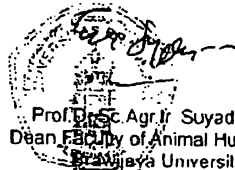
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