PERFORMANCE OF BROILER CHICKS FED WASTECANNEDFISHOIL IN RATION

by Jola Londok 11

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3rd AINI INTERNATIONAL SEMINAR

In conjunction to 50th Anniversary Faculty of Animal Science
Andalas University

THE ROLE OF NUTRITION AND FEED IN SUPPORTING SELF SUFFICIENT IN ANIMAL PRODUCTS, FOOD SAFETY AND HUMAN WELFARE

Padang, 24 – 25 September 2013

PROCEEDING

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3rd *International Seminar and 9th Biennial Meeting of* AINI
"The Role of Nutrition and Feed in Supporting Self Sufficiencyin Animal Products, Food Safety and Human Welfare"
in conjunction with
the 50th Anniversary of the Faculty of Animal Science
University of Andalas, Padang West Sumatera
Grand Inna Muara Hotel, Padang 24-25 September 2013

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FOREWARD
President AINI

Assalamu 'alaikum Wr. Wb.,
The Honourable Rector of The University of Andalas,
The Dean Faculty of Animal Science, University of Andalas
Distinguish guests, participants, ladies and gentlemen,

First of all, on behalf of the Indonesian Animal Nutritionist and Feed Sciencetist Association (AINI), I would like to extend our warmest welcome, and indeed it is a great pleasure to see you all in this room, participating in the 3rd*International Seminar and 9th Biennial Meeting of* AINI in conjunction with the 50th anniversary of the Faculty of Animal Science University of Andalas, Padang West Sumatera. AINI that was firstly established in 1996 with the objective to gather all of the animal nutrition and feed scientists in Indonesia permitting to the exchange of knowledge and experiences under spirit of brotherhood, to stimulate the advancement of science and technology in nutrition and feed science, thus benefiting to the competitiveness of livestock agribusiness.

Since its establishement 1996, AINI has been conducting regularly the biennial scientific meeting. From 2007, the scientific meeting was upgraded to the International level and the first International seminar was conducted at Jenderal Sudirman University, Purwokerto Central Java and then the second International seminar was held in Padjajaran University, Bandung West Java, while this third event is conducting here with the theme **"THE ROLE OF NUTRITION AND FEED IN SUPPORTING SELF SUFFICIENCY IN ANIMAL PRODUCTS, FOOD SAFETY AND HUMAN WELFARE"**

Distinguish guests, participants, ladies and gentleman,

The role of feed and nutrition is primordial in the livestock agribusiness, not only due to the fact that more than 70% of production cost is coming from the feed cost, but also the feed safety that affect the food safety is becoming the great issues in recent years and become a great concern by many countries in the world. Animal products such as egg, meat and milk are subjected to the government policy to reach the self sufficiency. Indonesian government has payed attention and put high priority especially in meat self sufficiency for 2014. Unfortunately, effot made by the government ie. Ministry of Agriculture since many years has facing now the difficulty to succeed, due to some raisons such as the meat price volatility, and also the low exchange rate of rupiah to the US dollar at this time being. Indeed, the demands on the animal products will be increasingly in the future as the population and income per capita are growing. We should take a part and do our best to support the government policy in fullfiling the food of animal products, quantitative and qualitatively. In this regards, role of nutrition and also Nutritionist and Feed Scientist are very important.

I would like also to take this opportunity to share the idea with all you, that AINI as the organization of scientist, to have a international scientific journal is a must. The jurnal deals with all aspects of nutrition and feed issues in tropical conditions. The Management board of AINI has taken the decision for revitalizing the AINI Journal to become the Journal of Nutrition and Feed Science, internationally recognized, by involving the International committee of lecture as the reviewers. To this end, we need

fully your support and encourage the scientists especially the young scientists to publish their work in English. The accomplishment of this task will bring the association be more respected in national and international level.

Distinguish guests, participants, ladies and gentleman,

For this opportunity, I should express my sincere thanks to the Dean of the Faculty of Animal Science,University of Andalas, the organizing committee, sponsors, and all party that cannot be listed since we are deeply in debt to all of your effort and sacrifice to the success of this seminar. Our sincere thanks must go to the Directorate General for Higher Education Department of National Education for the grant awarded. For our invited speakers,Prof. Tamo Fukamizo (Kinki University, Japan), Dr. Robert L. Payne (Evonik-US), Dr. Yuwares Ruangpanit (Thailand), Prof. Abdul Razak Alimon (UPM Malaysia), Prof. Yose Rizal (University of Andalas, Indonesia), Prof.Ali Agus (University of Gajah Mada, Indonesia), Prof. Suhubdy (Mataram University, NTB) we are indebt to your effort and your participation in this event. Your views will enlighten and inspire how to empower our local feed resources in sustaining the feed security for the future. Also, on behalf of the AINI, I must express my deepest gratitude to the Director General of Livestock Services Department of Agriculture for his willingness to give the key note speech to this seminar.

Distinguish guests, participants, ladies and gentleman,

I hope you will have the fruitful meeting and gaining many new ideas and perspectives to be developed in the future. I do hope also, we will see you again in the 4th International seminar and XthBiannual meeting 2015 that will be hosted by AINI member and colleagues from Sam Ratulangi University, Manado, North Sulawesi as the organizing committee.

Finally and surely, please enjoy your stay with west Sumatera culture and nature, tradition and hospitality, in addition to your scientific activities. Thank you,

Wassalamu 'alaikum Wr. Wb.

Padang, September 24th, 2013

President AINI

Prof. Ali Agus

FOREWORD
ORGANIZING COMMITTEE

Assalamu'alaikum Wr. Wb.,
The Honourable Rector of The University of Andalas,
The Dean Faculty of Animal Science, University of Andalas
Distinguish Guests, Seminar Participants, Ladies And Gentlemen,

First of all, we are very grateful for Allah the Almighty, who has allowed us to get together in the pretigious 3rd AINI International Seminar which is held by the Faculty of Animal Science, University of Andalas in conjunction to celebrate the 50th Anniversary of the Faculty of Animal Science, collaborated with Indonesian Association of Nutritionist and Feed Scientist (AINI). We would like to welcome all participants who have come from different provinces in Indonesia, and especially to our distinguished guests and participant from overseas (USA, Japan, Thailand, Malaysia, Philippine and Australia).

The animal protein consumption of the people in Indonesia and other developing countries around the world as well is still low. The Indonesian Government has performed many efforts to increase this animal protein consumption. One of them is through the launching of a program called the self sufficient in beef (program swasembada daging sapi = PSDS), that has been targeted to be achieved in 2014. Besides, other attempts are also to develop poultry and other animal industries that have contributed to the fulfillment of animal protein requirement. However, based on the animal industry condition nowadays it would be rather complicated to achieve it, due to the low in farm animal productivity in Indonesia.Among the problems of low in animal productivity are the nutrition and feed they obtain during their life cycles. Besides, the price of feed for animal industries could reach 60 to 70% of the total cost of animal production. Indonesia has very limited range land for cattle grazing and limited feed sources for poultry feeding. The cattle feeding are very dependent on the utilization of agriculture waste/by-product as the source of feed. Most of these available feedstuffs are low in quality, so that they require further processing before feeding them to cattle. Meanwhile, the poultry and other farm animal feeding are depending on imported feeds. The other problem is the concern in utilization of in-organic feedstuffs or feed additives for growing farm animals.

The theme of this seminar is very relevance to the nowadays national as well as international issues of feeding safety feed for livestock and poultry, and conserving nutritious, safety and hygienic food for human health. This nutritious, safety, hygienic and healthy food of animal origin will be obtained from the high quality of feed that is fed to animals. The feed and food processing technology will support the high quality of feed and food. This 3rd AINI International Seminar on nutrition and feed is held to collect the information and to share the ideas from nutritionists, scientist and practitioners on the nutrition, feed processing technology and its utilization for producing high quality of feed and food which are available in other part of the world to contribute to the human welfare.

Prof. Dr. Novirman Jamarun
Chairman of the Organizing Committee

WELCOME SPEECH

Rector of Andalas University

Bismillahirrahmaanirrahim,
Assalamu'alaikum wrwb, Peace be with you!
Your Excellency, Governor of West Sumatra Province.
Your Excellency, Chairman of House of Representative of West Sumatera Province
The Horable, Dr. Mursyid Ma'sum, M.Agr, Director of Animal Feed, Directorat General of Livestock and Animal Health, Ministry of Agriculture.
The honorable, The Chairman of Indonesian Association of Nutritionist and Feed Scientist (AINI), Prof. Dr. Ali Agus DAA, DEA, from Gajah Mada University.
Honorable guest, the Dean of The Faculty of Animal Science.
The Honorable guests all keynote speaker.
Seminar Committees, Participants, Ladies and Gentlemen,

Good evening.

First of all, let us say a merciful for Allah the Almighty who has given us a chance to meet each other at this 3rd AINI International Seminar which is held by the Faculty of Animal Science University of Andalas in conjunction to celebrate of 50th Anniversary Faculty of Animal Science, Andalas University.

On this occasion, I welcome all of the seminar participants who come from different places in the world, as well as participants from different uiversities and agencies in Indonesia.

On this opportunity, I would like to introduce to all of you about the University of Andalas. It was the oldest university in Indonesia, outside the Java Island that was founded in 1956. This university has 15 Faculties with 38 study programs for Sarjana degree, and 34 Graduate Study Programs for Master's and Doctor's degrees. The Faculty of Animal Science is one of the faculties at the University of Andalas which was established in 1963. I am very proud of this International seminar, which is conducted by the Faculty of Animal Science.
It indicates that the Faculty of Animal Science, University of Andalas, has the capability to create a link or a network with national as well as international level institutions, in which it is a kind of initiation toward the world class university.

Ladies and Gentlemen,

From this 3rd AINI International Seminar, I hope that it will result in the fruitful thoughts and brilliant ideas which could be implemented by the government and animal industrial community for the development of the Animal Feed industries in Indonesia as well as in West Sumatra. The Faculty of Animal Science University of Andalas plays a role in the development of feed industries in cooperation with the government, and livestock as well as animal nutritionist organizations.

Feed Industries contribute to the fulfillment of animal development in Indonesia because Feed is one most important factors to developt animal production and animal population and with cheap in price of feed will give high benefit could be reached by the

farmer. The development of feed and animal industries needs science and technology, and through this seminar, it is hoped that the scientists from all over the world could contribute the information and technology in disciplines in feed sciences.

Ladies and Gentlemen,

This seminar is in concomitant with the 57 year University of Andalas, and the 50 year Faculty of Animal Science Anniversaries. Considering the age of this institution, it is the appropriate time for this institution to play its role at the international level. The progress toward the world class university is a dream of every institution, including the University of Andalas. That is why I hope that this international seminar could be performed routinely, so that the development of science and technology in the field animal science could always be monitored and implemented by the animal community in Indonesia.

Finally, I would like to address my special thanks to the committees who have work very hard to prepare this seminar, congratulation and good luck for all of you.

Wassalammualaikum wr.wb.

Dr. Werry Darta Taifur, SE, MA
Rector of Andalas University

WELCOME SPEECH

Governor of West Sumatera

Assalamualaikum. ww

Your Excellency, Chairman of House of Representative of West Sumatera Province. Ir. Yulteknil, MM

The Honorable, Dr. Mursyid Ma'sum, M.Agr, Director of Animal Feed, Directorat General of Livestock and Animal Health, Ministry of Agriculture.

The honorable, Prof. Dr. Ali Agus DAA, DEA, The Chairman of Indonesian Association of Nutritionist and Feed Scientist (AINI) from Gajah Mada University.

Honorable guest, the Rector of the University of Andalas.

The Honorable guests all keynote speaker.

Honorable guest, the Dean of The Faculty of Animal Science.

Seminar Committees, Participants, Ladies and Gentlemen,

Seminar Committees, Participants, Ladies and Gentlemen,

First of all we are very grateful for Allah the Almighty, who has allowed us to get together in the prestigious 3rd AINI International Seminar which is held by the Faculty of Animal Science University of Andalas in conjunctionto celebrate of 50th Anniversary, Faculty of Animal Science, Andalas University.

I would like to say 'welcome' to all of participants who have come from different areas in Indonesia, and especially to the participants from several countries (USA, Malaysia, Thailand, USA and Japan).

West Sumatra is one of 33 provinces in Indonesia which is also called "Ranah Minang" or Minang Area, because this area mostly inhabited by Minangkabau ethnic. This province is well known with its beautiful scenery and culture, because it possess Sianok canyon, marvelous beach in Mentawai Island with its high wave that is suitable for surfing, gorgeous Harau Valley, four beautiful lakes (Singkarak, Maninjau, Upper and Lower Lakes), and several other places for tourism. We have two international regular events, the first is Tour de Singkarak, and the second is Padang International Dragon Boat competition. Tour de Singkarak, a bike racing event every year followed by many bicyclers from all over the world, got its name from this lake's name 'Singkarak'.

The population of West Sumatra province is approximately 4 million people who mostly are moslems. Besides, Ranah Minang also well known with its specific hot and spicyfoods. One of the menus is RENDANG, which is the most delicious food in the world. Rendang is made of varieties of meat (beef, chicken, or egg) which is mixed up with coconut milk, chili, and other ingredients. That is why, after this seminar I suggest you to spare your time visiting some of those beautiful and marvelous places while enjoying the specific menu I mentioned.

Furthermore, I would like to address that this 3rd AINi International Seminar is an important event for us, because it is a place where the experts from all over the world get together, informing their research findings to the others and sharing the ideas in order these findings and ideas to be useful for the development of science and technology in animal nutrition. The information from this seminar will be very useful for the development of animal industry in West Sumatra, Indonesia as well as in other countries around the world.

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Ladies and Gentlemen,

The target of the Indonesian Government nowadays is to achieve the self-sufficient in meat in 2014 in order to fulfill the demand for animal protein for the Indonesian people. For supporting the achievement of this target, the West Sumatra province is implementing a program called "Satu Petani Satu Sapi" or one farmer one cow which is funded by government and private. The purposes of this program are to motivate farmers to raise cattle, to accelerate the increase in the population of cattle, to accelerate the achievement of target in fulfilling the demand for animal protein, to vary the source of income for farmers, and to increase the farmers' income.

Ladies and Gentlemen,

Finally, I hope this seminar will produce the fruitful thoughts which could be implemented in the development of animal industry around the world as well as in Indonesia. Please enjoy this seminar, congratulation to the 50th Anniversary Faculty of Animal Science, University of Andalas, and I wish it will be continued with the other international seminars in different field.. Good luck for you all!!! And by saying: **Bismillahirrahmaanirrahim, I officially open this seminar.**

Wabillahitaufik walhidayah, Wassalamualaikum warahmatullahi wabarakaatuh.

Governor of West Sumatera Province

Prof. Dr. Irwan Prayitno, PSi, MSc

SEMINAR PROGRAM

TIME	ACTIVITIES	PIC	LOCATION
	Participants arrive in Padang	Transportation and Accommodation	Airport and Hotels
19:00–22:00	**Opening Ceremony and Welcome Dinner** Welcome address by Chairman of the 3rd AINI International Seminar (Prof. Dr. Novirman Jamarun) Welcome address by President of AINI (Prof. Dr. Ali Agus) Welcome address by Rector of Andalas University Welcome address by Governor of West Sumatera Province Inaugural of Regional Representative of AINI	MC Chairman President of AINI Rector Unand Governor AINI	Governor House, Jl. Sudirman, Padang

DAY-1 (WEDNESDAY, SEPTEMBER 25, 2013)

TIME	ACTIVITIES	PIC	LOCATION
08:00 – 08:30	Re-registration	**Secretariate**	**Assembly Hall**
08:30 – 12:30	**KEYNOTE SPEAKERS**		
08:30 -9:00	**Dr. Ir. Mursyid Ma'sum, M.Agr (Director of Animal Feed, Directorate General of Livestock and Animal Health Services, Ministry of Agriculture - Indonesia)** **Title:"**"Policy And National Program For Feed Development"	**Moderator : Dr. Maria Endo Mahata**	**OMBILIN HALL**
9:00 – 9:30	**Prof Dr. Tamo Fukamizo (Kinki University Japan).** Title: "The Mode of Action of Chitinolytic Enzymes: Production of Bioactive Oligosaccharides as Animal Nutrients"	**Dr. Maria Endo Mahata**	
9:30 – 10:00	**Dr. Yuwares Ruangpanit (Kasetsart University,Thailand)** **Title:** "Improving Egg Nutritional Value By Dietary Marine Sources – A Current Update"	**Dr. Maria Endo Mahata**	
10:00 – 10:30	**Prof. Dr. Yose Rizal (Unand, Indonesial)** Title:"The Utilization of Juice Waste Mixtures in Poultry Diets: A Review"	**Dr. Maria Endo Mahata**	
10:30 – 11:00	**Prof Dr Abdul Razak Alimon, Universiti Putra Malaysia, Malaysia)** Title: "Utilization Of Herbs As Growth Promoters In Animal Feed"	**Dr. Rusmana Ningrat**	
11:00 – 11:30	**Dr. Robert L. Payne, Ph D, PAS (Evonik – US)** **Title:' The Role Of Amino Acids In Sustainable Poultry Production"**	**Dr. Rusmana Ningrat**	
11:30 – 12:00	**Prof. Dr. Suhubdy Yasin**(University of Mataram, Indonesia) Tittle: " Rangelands and Pastures of Indonesia for Ruminant Production: a Poor Attention and Neglected Resources "	**Dr. Rusmana Ningrat**	
12.00 – 12:30	**Prof. Dr. Ali Agus, DAA, DEA** (University of Gajah Mada, Indonesia). Title: "Food And Feed Safety Issues In Indonesia : Reducing Mycotoxins Toxiciy And Its Carry Over From Feed Into Animal Products"	**Dr. Rusmana Ningrat**	
12:30 –13:30	**LUNCH BREAK**		

SESSION 1. RUMINANT NUTRITION (ROOM OMBILIN 2-3)
CHAIR: DR. IRSAN RYANTO H, UNAND, INDONESIA

1	13:40– 13:50	Estimation of Rumen Microbial Nitrogen Supply Based on Purine Derivatives Excreted in the Urine of Kejobong and Bligon Goat Feed by King Grass and Peanut Straw, *Yusiati, L. M., and C. Hanim, UGM, Indonesia*
2	13:50 – 14:00	The Effect Of NDF Ratio in the Diet on the Performance of Philippine Native Goats (*Caora hicus* Linn), *Nugroho, D., C.C. Sevilla, AA. Angeles, F. Setyawatie, Animal Science and Dairy Cluster, UPLB, Philippine*
3	14:00 – 14:10	Meat Physical Properties of Local Lamb Fed Urea-Impregnated Zeolite Ration, *Kardaya, D., E. Dihansih, D. Wahyuni, Djuanda University, Bogor, Indonesia*
4	14:10 – 14:20	In vitro study of *sardinella lemuru* oil based calcium-soap supplementation effects on the sheep's rumen digestibility ***Asep Sudarman***
5	14:20 – 14:30	Milk Composition Of Etawah Crossedbred Goat Fed Forage And Leaves Pellet *Suryanindyah, Y. Y., N. Umami, Nurliyani, Y. S. Muthoharotin, Y. P. Oktaviani, UGM, Indonesia*
6	14:30 – 14:40	Rumen fermentability and digestibility of lingzhi (*ganoderma lucidum*) and organic chromium supplementation in high and low forage rations ***Dwierra Evvyernie[1], Toto Toharmat[1], Sumiati[1] and Dian Astriana[1]***
7	14:40 – 14:50	Ruminal Degradation Characteristics Of Maize (Zea Mays) Leaves, *Rusdi, Mustaring, M. Salman, Animal Husbandry Dept, Tadulako University, Palu Indonesia*
8	14:50 – 15:00	The Effect Of Concentrate Offered In Ratio Based On Rice Straw To The Performance Of Bali Cattle, *Trisnadewi, S., T. G. O. Susila,I W.Wtjana, Faculty of Animal Husbandry, Udayana University, Bali*
9	15:00 – 15:10	Enhancing Performance of Sheep by Feeding Corn Leaf Biscuit. *Yuli Retnani, Sobri, D. K. Putra, and T. Toharmat, IPB Bogor, Indonesia*
10	15:10 – 16:20	Effect of Black Tea (*Camelia sinensis*) Waste on Rumen Degradation of Feed Protein, *Kurniawati, A., B. Nugroho and C. Hanim, UGM Indonesia*
11	15:20 – 15:30	Supplementation of Solid Ex-Decanter Multi-Nutrient Block on Simbrah Breed Weaned Calves Performances as Integrated Farming System with Palm Fruit Agroindustry, *Fariani,A., A. Abrar, G. Muslim, E. D. Y. Astuti and L. Warly, Sriwijaya University, Palembang, Indonesia*
	16:50 – 17:00	CLOSING CEREMONY AT OMBILIN 2-3
		FAREWELL DINNER AT MAJOR HOUSE OF PADANG CITY

SESSION 2. NON-RUMINANT NUTRITION (ROOM ANAI 1-2)
CHAIR: PROF. DR. KHALIL AND PROF. DR. YUSRIZAL, MSC, UNAND AND UNJA, INDONESIA

1	13:30 – 13:40	Productivity Of Local Chicken In Growth Periods And Carcass Characterics By Inclusion Of *Moringa Oleifera*Leaves MealsIn The Diets *Hafsah, S. Sarjuni, T. Riske, I. Kumbok*
2	13:40– 13:50	The Effect Of Palm Kernel Meal Contain Probiotic To Reduce The Fecal Ammonia Emmission In The Laying House, *Yusrizal, F Manin, Yatno and Noverdiman, University of Jambi, Indonesia*
3	13:50 – 14:00	Contribution Of Lysin And Calcium Of Azolla Microphylla On Egg Shel Calcium Deposition In Arab Hen, *Wulandari,E., C., R.H. Prawitasari, N Suthama, W. Murningsih, V.D Yunianto, I. Estiningdriati and H.I. Wahyuni, Agriculture Diponegoro University, Semarang, Indonesia*
4	14:00 – 14:10	Japanese Quail Eggs Qualtyfed Fermented Jatropha Curcas Meal, *Sumiarti, R. Mutia, and R. Khalim, IPB Bogor, Indonesia*
5	14:10 – 14:20	Evaluation in the presence of black tea waste extract on different level of energy-protein rations in the performance and carcass parameters of broiler ***Dilla mareistia fassah[1]*, supadmo[2] and rusman[3]***
6	14:20 – 14:30	Efforts for the meat quality of bali ducks through offering purple sweet potato (*ipomoea batatas* l) fermented aspergillus niger in diets ***Tjokorda gede belawa yadnya, ida bagus sudana, i gede mahardika and i m. Mastika***
7	14:30 – 14:40	Effect of avocado seed meal andfermented of banana peel meal to laying quail ***Hera dwi triani, ade djulardi, ahadiyah yuniza***
8	14:40 – 14:50	Layer Ducks Performances Fed Katuk Leaf Meal, *Hermana, W., M. Septiana and Sumiarti, IPB Bogor, Indonesia*
9	14:50 – 15:00	The Profile Of Corn-Cob Nutrient As Prospective Poultry Feed In Upper And Lower Land Area In West Sumatra *Maria Endo Mahata, Ahadiyah Yuniza, Nuraini1 and Yose Rizal*
10	15:00 – 15:10	Performance of Broiler Chicks Fed Waste Canned Oil Fish in Ration. *Jola J.M.R. Londok, John E.G. Rompis dan Youdhie H.S. Kowel.Fakultas Peternakan Unsrat Manado*
11	15:10 – 16:20	The dynamics of indigenous lactic acid bacteria probiotics on carcass yield, abdominal fat And intestinal morphology of broilers *Sri Harimurti , Miftahul Huda, and Anisa Dwi Kistiani*
12	15:20 – 15:30	The effects of xylanase supplementation on meat quality, carcass recovery and blood cholesterol in broilers fed on wheat-based diets ***Chusnul hanim, lies mira yusiati, ali wibowo, and muhamad nur cahyanto***
13	15:30 – 15:40	Digestive organ's growth of local duck fed high dietary fiber during post-hatch: effect on allometric measurement ***Hanny Indrat Wahyuni, Istna Mangisah, Nyoman Sutham) and Maulana Hamonangan Nasution***
	17:30 – 18:00	*CLOSING CEREMONY AT OMBILIN 2-3*
	19:00 – 22:00	*FAREWELL DINNER AT MAJOR HOUSE OF PADANG CITY*

SESSION 3. FEED SCIENCE AND TECHNOLOGY, PASTURE AND RANGE LAND, NUTRITION AND REPRODUCTION, SOCIO-ECONOMIS OF FEED AND FOOD (ROOM OMBILIN 1)

CHAIR: PROF. DR. MARDIATI ZAIN, MS, UNAND, INDONESIA

1	13:30 – 13:40	Effect of Somatotropin Hormone on Macroscopic and Microscopic Semen Quality of Simbrah Breed Bulls ***Gatot Muslim, A. Fariani, A. Abrar, E. D. Y. Astuti and L. Warly***
2	13:40– 13:50	Effect of vegetable and animal-derived ingredients on the physical pellet properties of extruded feed ***Suluh nusantoro, erfan kustiawan, and nurkholis***
3	13:50 – 14:00	Isolation and identification of lactic acid bacteria from feces of young calves as a potential Candidate of probiotic ***Ismail Jasin, Z. Bacrudin H. Hartadi***
4	14:00 – 14:10	Effect Of Shade On Growth And Productivity Of Torbangun, *Karti, IPB, Bogor, Indonesia*
5	14:10 – 14:20	Evaluation Of Availabiliy And Quality Of Forage At Limau Manis Campus Of Andalas University, Padang, West Sumatra, *Khalil, Unand, Indonesia*
6	14:20 – 14:30	Feed Intake And Efficiency In Mice (*Mus Musculus*) Given Treated – *Jatropha Curcas* L. Seed Meal, *Tjakradidjaja, Anita S., P. H. Siagian And Hadriyanah IPB, Bogor, Indonesia*
7	14:30 – 14:40	Effect Of The Extracted Cinnamin Stick And Ground Cinnamon Stick On The Rancidity Of Palm Oil Decanter Meal, *M. Afdal, A. Kasim, Ar. Alisman and N. Abdullah, University of Jambi, Indonesia*
8	14:40 – 14:50	Feed Intake, Nutrient Digestibility and Blood Glucose of Sheep Supplemented with Organic Chromium From Fungi Ganoderma lucidum. *Agustina, F., D.Evvyernie, D.Taniwiryono, S.Tarigan , T.Toharmat*
9	14:50 – 15:00	Analisys Performances Of Egg Poultry Industries In 50 Kota Regency As A Based Sector Of West Sumatra *Rahmi, E. W. Sartika. Unand, West-Sumatra*
10	15:00 – 15:10	Comparison Of Corn Stover Nutrient Content In Lower And Upper Land Areas In West Sumatra *Rusmana W. S. Ningrat1, Irsan Ryanto1, Montesqrit1and Giovani M. Turchini2*
11	15:10 – 16:20	Nutrients intake and their relation to milk production and qualities under traditional and Small scale indonesian dairy farms enterprises *Despal*, A. Lestari, Y. Destianingsih, Z. Malyadi, H. Hartono, L. Abdullah*
12	15:20 – 15:30	Utilization Onggok Enriched With Egg Powder To Making Nutritious Instant Food *Sukma, A. K. Sayuti, Novelina. UNAND West- Sumatra*
13	15:30 – 15:40	Study On In Vitro Digestibility Of Soaked Oil Palm Fiber By Filtrated Oil Palm Fruit Bunch Ash *Ari L. Darmawan, Asep Irawan, Tidi Dhalika, Ana R. Tarmidi, Mansyur, Atun Budiman, Kurnia A. Kamil and Iman Hernaman*
14	15:40 – 15:50	Productivity Of Bali Cattle Based On Scrotum Size, Body Weight And Feed Quality *Abyadul Fitriyah1, Nurul Hilmiati 2, Lalu Muhammad Kasip3,Sukmawat1, Totok.B.Julianto2*
15	15:50 – 16:00	Quality of rennet from rabbit stomach during cold and frozen storage ***Nurliyani[1], Indratiningsih[2], Mufti Tri Matra***
16	16:00 – 16:10	*IN VITRO* CULTURE FOR THE SUPPLY OF MATERIAL GENETIC TRANSFORMATION ON DWARF NAPIERGRASS (*Pennisetum purpureum* cv. Schumach) ***Nafiatul Umami***
17	16:10 – 16:20	Eggs rendang characteristic by addition of gambier catechin antioxidan ***Deni novia, Afriani Sandra Indri Juliyarsi Anwar Kasim and Azhari Nuridinar***
	17:30 – 18:00	CLOSING CEREMONY AT OMBILIN 2-3
	19:00 – 22:00	FAREWELL DINNER AT MAJOR HOUSE OF PADANG CITY

POSTER SESSION (OMBILIN ASSEMBLY HALL)

CHAIR: PROF. DR. IR. NURAINI, MS AND PROF. DR. IR. YETTY MARLIDA, MS, UNAND, INDONESIA

12:00 – 14:00

P-01	The effect of concentrate ratio based on palm kernel cake on pH on, VFA and NH3 In-Vitro Rumen. ***Arief, N. Jamarun, Elihasridas, F. Achmad***
P-02	Integrated Farming System With Empowerment Of Cattle Farmers Group In Village Kinomaligan. ***F.H. Elly, A.Makalew, F.N.S. Oroh dan D. Polakitan***
P-03	The Effect Bioprocess of Banana Peels With The Different of incubation lenght and the source of Local microorganisms (MOL) on Crude Protein, Crude fiber and lignin content. ***Tri Astuti and S. Amir***
P-04	The content of phytochemical and antibacterial activity of cinnamon leaf (*Cinnamomum burmanii)* and Noni Fruit and Leaf (*Morinda citrifolia L)* mixture extract to Replace Antibiotic. ***Yuniza, A and Yuherman***
P-05	The Effect of Suplementation Lamtoro (Leucaena Leucocephala) Based on Rice Straw Amoniation Ratio on In-Vitro Rumen Characteristics. ***Herawati, R., N. Jamarun, M. Zein, Arnim***
P-06	Dry Matter And Organic Matter Digestibility Of Java Wood (Lannea Coramandelica) Leaves By Use In Sacco. ***Fatmawati***
P-07	Improving Quality Soybean Waste by Fermentation as Poultry Ration. ***Mirnawati, Ade Djulardi and Helmi Muis***
P-08	Effectoftotaltimemarketingonmicroorganismsincattle Meat Marketed In Padang Great Market, West Sumatera. ***Yuherman, Eva Umar, and John Farlis***
P-9	The Application Of Science And Technology For Cattle Farmers Group For Improving Integrated Farming System In Village Ongkaw. ***A.H.S. Salendu., F.H. Elly., M.A.V. Manese dan D. Polakitan***
P-10	Performances And Hematological Profile Of Broiler Under Heat Stress Fed Diet Containing Carica Papaya L. Leaf Meal And Curcoma Domestica Val. ***Dwi Margi Suci, Dewi Apri Astuti, F.Kumala. Dewi and D. Kuncoro Sakti***
P-11	Mix Of Lingzhi (Ganoderma Lucidum), Organic Chromium And Roasted Soybean Evaluated As Feed Supplement For Laying Hen. ***Tania Perdana Putri, Dwierra Evvyernie, Dwi Margi Suci And Muhammad Lukmannulhakim***
P-12	Fermentability And Degradation Of Concentrate Contents Dry Carboxylate Salt Or Methyl Ester In Rumen Liquid. ***A.M . Tasse, E.B. Laconi, D. Agustina***
P-13	Comparative Analysis Of Nutrient Composition Of Different Sorghum Varieties After Ensilage Processes. ***Awistaros Angger Sakti, A. Sofyan and H. Julendra***
P-14	Viability Of Lactic Acid Bacteria Isolated From Rumen Liquor On Molasses Mixture Medium. ***Ema Damayanti, N. A. Hermawati, A. Pangastuti and A. Sofyan***
P-15	Effect Of Formic Acids In Silage Processing From Shrimp Head Waste As Animal Feed. ***Mirzah, Montesqrit and Suslina A Latif***
P-16	Effects Of Saga Leaves And Yellow Leaves On Rumen Microbes And In Vitro Digestibility. ***Dwierra Evvyernie, H. Ahmad Sukria, E. Harlina, E. Rachmi, A. Winarni And U. Nurjannah***
P-17	Flushing With Different Sources Of Energy Quality Ration On Reproductive Performance Local Sheep, ***Khotijah, L., K.G. Wiryawan, K.B.Satoto, D. Diapari, N.B.Sitepu and N.E.K.Santi, IPB, Bogor, Indonesia***
P-18	**The use of *trichoderma harzianum* in the fermentation of tofu waste product** ***Burhanudin Malik; Anggraeni; Sawarni Hasibuan; Rudiana[1]***
P-19	Indigofera Zollingeriana Adaptation To Drought Stress And Mycorrhiza Inoculation ***S. Sowmena), L. Abdullahb), P.D.M.H. Kartib), D. Soepandic)***
P-20	Effect Of Cocoa Pod And Cocoa Leaf On In Vitro Fermentation And Nutrient Digestibility ***J. Rahman, M. Zain, and Erpomen***

P-21	Effect Of Vitamin E Supplementation In The Extender On Frozen – Thawed Semen Preservation Of Pesisir Cattle ***Zaituni Udin; Ferdinal Rhim; Jaswandi and Ayu Fadillah***
P-22	**Green livestock development: the role of lactic bacteria for improvement and utilisastion Of total mixture forage** ***Zaenal Bachruddin[1], Supadmo[1], Lies Mira Yusiati[1], Chusnul Hanim[1], Asih Kurniawati[1], Dimas Hand Vidya Paradhipta[2] and Mayansari[2]***
P-23	**The effects of roasted coriander seeds in the diet on carcass trait and cholesterol content of broiler** ***R.Mutia, R.G. Paminda, and N.Ramli***
17:30 – 18:00	**CLOSING CEREMONY AT OMBILIN 2-3**
19:00 – 22:00	**FAREWELL DINNER AT MAJOR HOUSE OF PADANG CITY**

INVITED SPEAKERS

Invited Speakers at 3rd AINI International Seminar, Padang, West Sumatera, Indonesia

Dr. *Mursyid Ma'sum*, M.Agr

Director of Animal Feed, Directorate General of Livestock and Animal, Health Services.

Prof Dr. Tamo Fukamizo (Kinki University Japan)
graduated his Bachelor and Master course of Agricultural Chemistry of Kyushu University, Japan, in 1977 and 1980, respectively. He completed his Ph.D. in Kyushu University in 1983. Currently, he is a full professor of Enzyme Chemistry at Department of Advanced Bioscience, Kinki University, Japan. His research of interest is,
1. Crystal structure analysis of the chitinase-oligosaccharide complex
2. NMR analysis of the interaction of chitin-binding proteins
3. Calorimetric analysis of the interaction of chitin-binding proteins
4. Conversion of chitinase into a glycosynthase by protein engineering technique
5. Biomass conversion from fungal cell wall by enzymatic digestion
Recently, in collaboration with Dr. Maria Mahata, University of Andalas, he successfully produced partially N-acetylated chitooligosaccharides, which might be used as animal food ingredients, directly from fungal cell wall. In today's his lecture, mechanism of oligosaccharide production from chitin and chitosan biomass will be presented, and the utilization of the products will be discussed.

Dr. Robert L. Payne, Ph D, PAS (Evonik - US)
Regional Director of Nutrition and Technical Services for Evonik Health & Nutrition. Rob joined Evonik-Degussa in 2004, and since that time, he has served Evonik's Health and Nutrition group as Animal Nutrition Services Manager, Technical Services Manager for US and Canada, and Director of Nutrition and Technical Services for North America. In 2011, Rob moved to Singapore to become Director of Nutrition and Technical Services for the Asia South region. As technical director, Rob is responsible for guiding Evonik's value-added technical services team, which provide tools and consulting for nutritional, analytical, and feed production issues. Rob has authored numerous peer-reviewed, popular press articles, and invited talks, and currently serves on the editorial boards for the Journal of Animal Science and Poultry Science.

Prof. Dr. Ali Agus, DAA, DEA (University of Gajah Mada, Indonesia)
Graduated from the Faculty of Animal Science, University of Gajah Mada in 1989, and completed his DAA, DEA (1993) and Doctorate (1996) from Ecole Nationale Supérieure Agronomique de Rennes (ENSA), Rennes, France in Nutrition and Physiology of Dairy Cattle He is also a member of National Feed Commission, Department of Agriculture, Republic of Indonesia. He published several books and articles in peer reviewed international journals, presented papers in international meeting and published in Proceedings. His research interest are in animal nutrition, feed toxicology, mycotoxins and community developments.

Dr. Yuwares Ruangpanit (Thailand)
graduated her Bachelor and Master in Animal Science from Kasetsart University, Thailand in 1992 and 1995, respectively. She completed her Ph.D. in Nutrition from North Carolina State University in 2004. Currently, she is a lecture of Mono-gastric animal nutrition at Department of Animal Science, Kasetsart University, Thailand. Her research of interest is nutritional evaluation and application of alternative energy and protein source for poultry, especially, a high fiber by-product from Agro-industry. Her responsible research also involves in the application of feed additive in mono-gastric animal under tropical conditions

Prof. Dr. Abdul Razak Alimon (Malaysia)
obtained his Bachelor of Science and Masters of Science in Agriculture from the Faculty of Rural Science, University of New England, NSW, Australia in 1971 and 1980, respectively, and completed his Ph.D degree in 1989 at University of Reading, United Kingdom. He is currently a Professor of Animal Nutrition at the Department of Animal Science, Faculty of Agriculture, Universiti Putra Malaysia. His current interest is in the utilization of herbs as growth promotants in poultry and also agricultural byproducts as animal feed.

Prof. Dr. Yose Rizal (Indonesia)
graduated from the Faculty of Animal Science, University of Andalas, Padang, West Sumatra, Indonesia with a Sarjana degree in 1981, and completed his Master and Ph.D degrees in Animal Nutrition, at the Department of Animal Science, University of Illinois, USA in 1987 and 1989. He is currently a Professor at the Faculty of Animal Science, University of Andalas, Padang, West Sumatra, Indonesia. Now, he is also responsible for the Quality Assurance at the University of Andalas. His area of interest is in the utilization of agriculture wastes/by- products for poultry feeds.

Prof. Dr. Suhubdy Yasin (Indonesia)
Is highly distinguish profesor in ruminant nutrition science, awarded as Ph.D. From the University of Queensland, Australia 2002. He was a fullbright visiting profesor at Utah State University, USA 2008/2009. He is Director a Research Center Of Tropical Rangelands and Grazing Animal Production System**s,** Indonesia.

CONTENTS

10. PERFORMANCE OF BROILER CHICKS FED WASTECANNEDFISHOIL IN RATION

Jola J.M.R. Londok, John E.G. Rompis dan Youdhie H.S. Kowel.
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Abstract

This research was conducted to study the effect of supplementing waste canned fishoil (WCFO) in diet on broiler performance.One hundred three-weeks broiler chicken were randomly assigned to twenty pen to recieve four dietary treatments with five replicates (5birds/replication). By usingCompletely Randomized Design (CRD), the treatments were conduct as follows:R_0 =Ration contains 4% WCFO; R_1 =Ration contains 6% WCFO; R_2=Ration contains 8% WCFO; R_3=Ration contains 10% WCFO.Data analyzed with Analysis of variance (ANOVA) and Honestly Significant Difference (HSD) (Kusriningrum, 2008). Water and feed were provided ad libitum. The feed stuff material consisting of corn, soybean oil cake, fish meal, coconut oil cake, ground bran, crude bran, mineral, DL methionine and lysin. Ration is arranged according to broiler's life period.The result showed thatthere were no significant different (P>.05) infeed consumption. Supplementation of waste canned oil fish increased (P<.05) body weight gain and feed efficiency until 8%. Among the treatment, 8% waste canned oil fish revealed the best results with the highest body weight gain and feed efficiency.

Keywords: waste canned fishoil, feed efficiency of broiler.

INTRODUCTION

Indonesian societies consumption pattern for animal production, especially for meat consumption was faced a problem, on one hand meat consumption per capita is still low, but in the other hand some consumer disposed to limit consumption of poultry meat caused the opinion that fat would make negative effect on food quality (cholesterol-phobia). Foods for healthy live recommendations were risen in many countries, and even WHO as an International Institution was extend instruction to peoples to consumption more patty and fiber in contrary little fat and cholesterol. Certainly, this issue was become a challenge for animal nutritionist to produce animal product as a safety food for consumer.

Feed availability in an animal exertion (animal business) was the primary problem up to now. An effort that used to do was diversification of potential feed. North Sulawesi was known as fish source region. Fish oil was a nature marine substance that known contain omega-3. Omega -3 could prevent generative diseases like coroner heart disease and artery-sclerosis, wherein could decrease cholesterol level and repair HDL/LDL ratio.In 1988, recommendation to eat fish for Indonesian with 50 kg body weight was 18 kg/capita/year (Wiryanti, 1990). Fish consumption averages for North Sulawesi was 28 kg/capita/year, while in Java as lower, 5 kg/capita/year (Berhimpon, 1990*In* Adisukresno, 1995). As a fish producer, canned fish fabric in North Sulawesi had a high capacity production. Canned fish processing was result some solid and liquid waste. Solid waste were head, red meat, bone, innards and fin, while liquid waste were pre-cooking bye product and boil water (Buckle *et al*. 1985). Fish oil from canned fish fabric was liquid waste origin (Irianto, 1992).From about 5.8 millions km2 in wide and 7.2 millions tonnage/year fish sources, only 40% was used. North Sulawesi was very potential in sea sources including fish as omega-3 fatty acid source. Some researchers found that in North Sulawesi oceans, unsaturated fatty acid was higher (approximately 54-62 %) than saturated fatty acid (Harikedua, 1992 and Berhimpon*et al*., 1994,

*In*Adisukresno, 1995). According to Wiryanti (1990), fish contain 5 – 20 % fatty acid and of it contain unsaturated fatty acid with double bond, including omega-3. There were many kind of fish catching in North Sulawesi ocean, for instant: "*cakalang*" (*Katsuwonus* sp.), "*tuna*" (*Yellow fin*), and "*Deho*" (*Rastrelliger*sp). Brodeur (2000) said that fresh meat tuna contains 1.504 g omega-3 fatty acid in each 100 g (0.363 EPA, 1.141 g DHA). Canned Tuna contain 0.202 g omega-3 fatty acid in each 100 g fat (0.027 g EPA, 0.101 g DHA).Meat chicken was a high nutrient of food product, so make an important role to meet a demand of animal protein. In addition of the nutrients, broiler has another superiority namely need a relatively short in time to rearing (in 5 weeks or 35 days could reach out ideal market weight) and reach out market price.Fast increasing of body weight gain in broiler, always followed by high fat deposit and cholesterol in meat. Cholesterol has many roles in embryo growth, structural component of cell membrane, as a precursor of adrenal, vitamin D and bile salt. Food efficiency showed the biology ability of an animal to result a product from feeds. Food efficiency influenced by some factors namely feed consumption, digestibility, nutrients using, energy and protein in ration.

According to all opinion before, a research had done to study the effect of omega-3 from some waste canned fish oil sources on broiler feed efficiency.Fish oil waste from canned fish was potentially as a source of omega-3, had known its utility and recently many studies about that was conducted. Its utility as a component of ration was possible. Omega-3 in fish oil could decrease cholesterol and would influence the animal body weight gain. The problem was not known yet how far its influence on feedefficiency of broiler whichconsumption some fish oil waste from canned fish as omega-3 source.

MATERIAL AND METHODS

This research was conducted to study the ration conversion of broiler fed WasteCanned Fish Oil (WCFO), in order to reach optimum growth. In this study, 100 three weeks broiler chickens was chose from 200 DOC in order to met homogenous weight. By using Completely Randomized Design (CRD), twenty (20) units cages were assigned into four (4) treatments group, each treatment in five (5) replicates. The treatments were as follow: R0 = Ration contains 4% WCFO; R1 = Ration contains 6% WCFO; R2 = Ration contains 8% WCFO; R3 = Ration contains 10 % WCFO. The effects of the treatments wereevaluationby using the Analysis of Variance (ANOVA) of Completely Randomized Design (CRD). Experimental diet composed of yellow corn, fishmeal, rice bran, soybean meal, crude palm meal, minerals, DL-methionine and Lysin. Ration was arranged according to broiler age periods. Broiler chickens were reared during fourty(40) days, consist of 14 days starter period, fed 24% protein and 2400 kcal/kg level energy ration, and grower period start at age 2 weeks up to finisher fed ration which agree with protein treatments ration and level energy that balance to protein (Table 1).Feed consumption was observed everyday by measure the amount which given and decrease the residue during 24 hours. Body weight was measure at the beginning and end of the experiment period.Parameter performance that measured in this experiment were feed consumption, body weight gain and feed efficiency of broiler. The effect of the treatments were evaluated by using the Analysis of Variance (ANOVA) of Completely Randomized Design, and the differences among treatments were analyzed using Honestly Significant Difference (HSD) (Kusriningrum, 2008).

RESULTS AND DISCUSSION

Effect of Treatments on FeedConsumption

Averages of feed consumptionat each treatment during these experiment was showed at Table 2. The averages of experiment feed consumption were 104.44±1,10until 106.37±2,26$g.head^{-1}.day^{-1}$. These were suitable toWahyu (1992) recommendation, that male finisher chicken broiler consumption were 100 to 135 g$head^{-1}$ $.day^{-1}$. Result of analysis of variance show that treatments make a non-significantly differences ($P > 0.05$) on feed consumption. It was mean that waste canned fish oil up to 10 % in chicken broiler ration was gave same effect on feed consumption, cause the experimental chicken broiler consumption protein – energy ration balance that relatively same, namely 142 – 143. Tillman *et al*. (1977) said that feed consumption was influence by body weight, feedstuff quality, management, environment climate, and animal healthy. Feedstuff quality was show by nutrients balancing in ration, primary protein-energy balance. This statement was supported by Suprijatna*et al*. (2005) that the amount of feed consumption were depend on feedstuff quality that utilized in ration, nutrients composition, suitable to the needed for optimum growth and productivity, and reared at the same environment condition. Another factor that influence feed consumption was ration physic shape. All experiment chicken broilers were gave same physically ration, namely mash, so it was not surprising that feed consumption was not influencing by using waste canned fish oil.

Effect of Treatment on Body Weight Gain

Averages of body weight gain of each treatment during the experiment were show at Table 2. The averages of chicken broiler body weight gain during the experiment were 41.57±0,69 – 45.75±0,46 g$head^{-1}.day^{-1}$. This was suitable to Wahju recommendation (1992), that chicken broiler body weight gain was 35.7 – 48.6 g$head^{-1}.day^{-1}$. Result of analysis of variance show that treatment gave a significantly differences ($P < 0.01$) on chicken broiler body weight gain. The highest body weight gain was reach at treatment R2 with 8 % WCFO. HSD test show that there were significantly differences ($P < 0.01$) between R0 compare to R1, R2 and R3; between R1 and R2 was significantly difference ($P< 0.05$), while between R1 and R3, also R2 and R3 were non significantly difference ($P> 0.05$). This result showed that WCFO could increase ration quality. According to Parakkasi (1985), ration quality would influence body weight gain. Fish oil tined waste in ration could increase ration fat level. Waste Canned Fish Oilwas rich in *eicosapentaenoic acid* (EPA), which could increase muscle mass and so influence body weight gain (Suprijatna, *et al*., 2005). Chicken broiler could deposit energy as fat in its body up to 40 %. Consumption fat overbalance would cause fat accumulation in body and support body weight gain.

Effect of Treatment on Feed Efficiency

Averages of feed efficiency at every treatment during the experiment were presented at Table 2. Feedefficiency of chicken broiler experiment were about 0.391±0,07 -0.437±0,02. This result was lower than Wahju (1978) recommendation, namely 0.35 – 0.49. Analysis of variance showed that treatments significantly ($P < 0.01$) influence that feed efficiency. Further test evidence that feed efficiency of R0 were not significant different to R1, R2 and R3. Between R1 and R2 were not significant different, whereas between R1 and R3, R2 and R3 were significantly difference. This result show that WCFO in ration up to 10 % was affect chicken broiler

feed efficiency, and the best result was R2 (8%). Feed efficiency of R0 was lower than R1, R2 and R3; this was caused by body weight gain of chicken broiler that fed R0 ration was lower than body weight gain of R1, R2 and R3 treatment. This result was suit to Suprijatna*et al*. (2005), that feed efficiency was affected by consumption and body weight gain.

Feed efficiency was show the biology ability of an animal to result a product from feed. Feed efficiency value was the ratio between body weight gain average compare to ration consumption average for each animal during the experiment period. Feed efficiency of R0 was lower caused by the feed consumption was lower too, so the nutrient for body weight gain was lower too. According to Anggorodi (1985) that feed efficiency was affected by ration consumption, digestibility, and nutrients utility.

CONCLUSION

Waste Canned Fish Oil in chicken broiler ration up to 8% revealed the best result withthe highest body weight gain and feed efficiency.

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