Re: [10th-cicmr] Submission Acknowledgement

From: 10th International Congress and International Conference of Indonesia Society for Microbiology (cicmr@microbiol.ac.id)

To: rma_fispro@yahoo.com

Date: Wednesday, August 27, 2009 at 08:48 PM GMT+7

Dear 10th - CiCMR participants

Hereby I would like to inform you about the preparations for 10th International Congress and International Conference of Indonesia Society for Microbiology 2009.

For those who are doing Oral Presentation :
The plenary session for oral presentation will be held at Room 2nd floor of Tropical Diseases Center Universitas Airlangga. Please prepare a power point presentation for 15 minutes presentation, please be advised that the organizing committee will be strict to the timetable and thus who unable to finish their presentation isnot the committee responsibilities.

We recommend the presenter to not make presentation more than 10 slides. Please send your presentation to the cicmr@microbiol.ac.id before Sept 5, 2009 with the subject and document's name following this specific format :presentation_First author name. The schedule for oral presentation will be informed very soon.

For those who are doing Poster Presentation :
The poster session will be held in front of Room 2nd floor of of Tropical Diseases Center Universitas Airlangga. Please prepare the poster in A0 paper **(1200 mm X 850 mm)** and please bring the poster during registration time. Presenter should put their own poster in the space that the organizing committee provided.

I enclosed the conference schedule for your information. In case you have any question regarding the conference please do not hesitate to ask the organizing committee. Thank you very much and welcome to 10th CICMR 2009.

Best regards

2009-08-28 10:49 GMT+07:00 10th International Congress and International Conference of Indonesia Society for Microbiology <cicmr@microbiol.ac.id>:

> Dear author, after reviewing your paper we found out that your paper contain 20% of plagiarism. Please revise your paper according to plagiarism test result. Thanks.
>
> 2009-08-26 6:30 GMT+07:00 10th CICMR <cicmr@microbiol.ac.id>:
>
> > Good morning Erma Safitri:
> >
> > Thank you for your submission, "Unnatural Forced Moulting in the Laying Hen as cause of Zoonosis from *Salmonella enteritidis*"
> >
> > to 10th International Congress and International Conference of Indonesia Society for Microbiology. With the online conference management system that we are using, you will be able to track its progress through the editorial process by logging in to the conference web site:
> >
> > Submission URL:
> > http://conference.microbiol.ac.id/ index.php/cicmr/author/ submission/1319
> > Username: erma_safitri123
> >
> > If you have any questions, please contact me. Please following us at our website and our social media platform to keep update for this up coming event. Thank you for considering this conference as a venue for your work.
> >
> > 10th CICMR
> > 10th International Congress and International Conference of Indonesia Society for Microbiology

> > 10th International Congress and International Conference of Indonesia Society for Microbiology
> > http://conference.microbiol.ac.id/_index.php/cicmr/index
>
> --
> 10th International Congress and International Conference
> of Indonesia Society for Microbiology
> Universitas Airlangga
> Surabaya
> Indonesia

--
10th International Congress and International Conference of
Indonesia Society for Microbiology
Universitas Airlangga
Surabaya
Indonesia

PROCEEDING

10th Congress and International Conference of Indonesian Society for Microbiology

Surabaya, November 19th-21th, 2009

Recent Advances of Microbiology in Health, Bio-Industri, Agriculture and Environment

Editors :

Fedik Abdul Rantam

Koesnandar

Soewarno

Purwati

Eryk Hendrianto

PROCEEDING

10th Congress and International Conference of Indonesian Society for Microbiology

Surabaya, November 19th - 21th, 2009

Editors :
Fedik Abdul Rantam
Koesnandar
Soewarno
Purwati
Eryk Hendrianto

Proceeding

10th Congress and International Conference of Indonesian Society for Microbiology

Editor :

Fedik Abdul Rantam, Koesnandar, Soewarno, Purwati, Eryk Hendrianto

504 + x hal

ISBN 978-602-97750-0-6

Publisher:

Indonesian Society for Microbiology & Airlangga University
Surabaya, November 2009

Surabaya, November 19th, 2009

OPENING REMARK
CHAIRMAN OF ORGANIZING COMMITTE

Microbiology-based industrial development to date is a fundamental need in the development of health and welfare of the whole community. Microorganisms are the foundation exploration and engineering that have a competitive and productive, so has the value of a significant advantage. Basic of this development based on the role of molecular biotechnology that utilizes microorganisms. The microorganism is use for industrial, environmental remediation, diagnostic, therapeutic materials, materials for vaccine and gene therapy vectors.

Congress of this proceeding are :

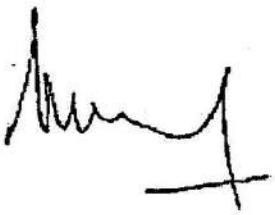
Theoretically Molecular exploration can be developed and applied in the industrial world for that health is a critical point of this approach to creating superior products based on microorganisms.

This Proceeding has discussed of about the latest developments bioindustri role in the development of microbiology, health, therapeutic, food technology, agriculture and environment. The focus of the discussion which will be discussed, lactic acid, enzymes, vaccines, diagnostics, immunotherapy, probiotics, food and environment-based bioindustri and microbiology.

PERMI in espousing the construction industry based on these microorganisms in cooperation with the International Microbiology society (IMS), the Association of lactic acid, Institute of Tropical Disease (ITD) as a center of medical biotechnology, Airlangga University, which is a tropical disease research center that focuses on education, research and service in health field. Related to those things need to be addressed so that the development of scientifically-based industrial technology on microorganisms are the main targets in the development of biotechnology that leads to its role in the bioindustri, health, food security and environment.

Surabaya, November 19th 2009

Chairman of the Committee,



Prof. Dr. Fedik A. Rantam, DVM

CONTENTS

INDUSTRI:

COMMITTEE
10th CONGRESS AND INTERNATIONAL SYMPOSIA CONFERENCE OF INDONESIAN SOCIETY FOR MICROBIOLOGY

1. Steering Committee

Chairman	:	Prof. Dr. Harianto Danutirto, DEA.
Secretary	:	Dr. Ir. Koesnandar M. Eng.
Members	:	Prof. Amin Subandrio, MD., Ph.D.
		Prof. Dr. Ir. Antonius Suwanto, MSc
		Prof. Dr. Ir. Sutriswati Endang Rahayu, MSc.
		Prof. Sam Suharto, MD, Sp.MK. (K)
		Dr. Ir. Students Setyahadi
		Dr. Nasronudin, MD. SpPD (K)
		Prof. Dr. Kuntaman, M.S. MD (SpMK)
		Prof. Dr. Abdul Fedik Rantam, DVM.

2. Organizing committee

Chairman	:	Prof. Dr. Abdul Fedik Rantam, DVM
Secretary	:	Dra. Yenni Bachtiar, M.Agr.Sc.,
		Dr. Retno Indrawati, M. Si, drg.
		Purwati, dr., SpPD
Treasurer	:	Dra. Diana Nurani.,
		Dr. Diah S. Ernawati, drg., MSI., SpOM
Funds	:	Drs. Nicodemus, MM.,
		Lindawati Palilingan, dr., MS
Scientific	:	Dr. Suwarno, MSI. DVM.
		M. Inge Lucida dr., MS., Ph.D.

Protocol & gathering night:
Dr. Prihatini Widiyanti, M. Kes., Drg
Dr. AT. Soelih Estoepangestie, drh., DVM.

Food and Baverage:
Tutik Kusumaningsih, drg. M.Kes.
Dr. Anggraini Rahayu, SKM., Msi

Transportation	:	Bayu, dr.
		Budi Rahardjo, drg. M. Kes.
Equipment	:	Arja Mukti Diamond, dr.
		Wartono SH

Publications and documentation:
Agung Dwi Wahyu Widodo, dr., Si
M. Anam Al-Arif, MP., DVM.

UNNATURAL FORCED MOULTING IN THE LAYING HEN AS CAUSE OF ZOONOSIS FROM *SALMONELLA ENTERITIDIS*

Erma Safitri, Pudji Srianto, Trilas Sardjito

Reproduction Veteriner – Fakulty of Veteriner-Unair
Kampus C, Jl. Mulyorejo,Unair. e-mail: rma_fispro@telkom.net

Abstract

The aims of this reseach is to give information to the farmers and people about the bad consequences of consuming the poultry products that use unnatural forced moulting. The research was carried out by examining *Salmonella enteritidis* bacteria in the laying hens feces after treatment.

The laying hens devided in three groups and treatment with unnatural forced moulting, dietary feed carried out during 2, 3 and 4 days, and the another group given natural forced moulting treatment by 200 ìg/ml each hen á Prl single dose compared with the group without dietary feed and á Prl.

The result showed that unnatural forced moulting with dietary feed during 2, 3 and 4 days decrease laying hen immune function. It was founded *Salmonella enteritidis* in laying hens feces after treatment. The *Salmonella enteritidis* can be the causal factor of zoonosis for human.

Key words : Unnatural forced moulting, natural forced moulting, laying hen, α Prl, *Salmonella enteritidis,* zoonosis

Introduction

Problem of stopping egg production when laying hens enter molting period cause many loss of benefits, economically and time (Safitri, 2005, Safitri, 2008). First molting period of laying hens is at 22nd – 24th months. The duration of this period is 60 -75 days (Darmana and Sitanggang, 2002, Sudarso and Siriwa, 2002). If there is no action against this period, it will take longer time for laying hens to produce again eggs, about 80-100 days (Marhiyanto, 2000, Indarto, 1989, Juli, 1982).

Bell and Kunney (2003) and Avma (2003) found that to overcome molting period in United States, it has been done natural forced molting and unnatural forced molting. The forced molting method carried out in 3 ways : dietary feed, giving low nutrient feed (protein, calcium, and natrium), use of drugs and methalibure, chlordamine, high dose iodium, aluminum, and zinc.

In Indonesia, it has been done many efforts to overcome molting period : dietary feed (unnatural forced molting). It was carried out for about 30 days (Safitri, 2008, Barton, 2003, Sainsbury, 1995). Long unnatural forced molting can cause stress to laying hens, decrease of immune function, and laying hens can be attacked easily by diseases (Poultry, 2003, Alodan and Mashalay, 1999).

One of the diseases follows unnatural forced molting is Salmonellosis caused by Salmonella enteridis (Sukamto and Hendarti, 2008, Fact, 2001, Webster, 1999). Salmonellosis is infectious disease and zoonosis to human. Since 2000, it has been banned the use of unnatural forced molting by dietary feed (Avma, 2003).

Butcher and Miles (2002) found that unnatural forced molting decreased T cell in blood. The decrease of T cell can cause the immune decrease and increase the sensitivity to the disease, especially Salmonellosis.
Turner and Bagnara (1998), Knobil et al (!988) and Hafez (2000), found high prolactin hormone at molting hens. Safitri (2005) and Safitri et al (2006) found an alternative to overcome molting period by natural method to arabic hens and laying hens (use of α Prl). It is effective to resist molting period and make laying hens produce again eggs.

The present research is carried out to give information about the method to overcome molting period by natural forced molting as substitute of unnatural forced molting method.

Materials and methods

Fifty laying hens in molting period were grouped and placed in cage randomly by five treatments (each treatment with 10 repetitions):

PO (control) : ten laying hens in molting period without natural forced molting and without unnatural forced molting

P1 : ten laying hens in molting period were treated by natural forced molting, by giving single dose of α Prl 200 ìg/mL each laying hens

P2 : ten laying hens in molting period were treated by unnatural forced molting, by dietary feed for 2 days consecutive without feed and only drink given

P3 : ten laying hens in molting period were treated by unnatural forced molting, by dietary feed for 3 days consecutive without feed and only drink given

P4 : ten laying hens in molting period were treated by unnatural forced molting by dietary feed for 4 days consecutive without feed and only drink given

In the fifth day, it has been checked Salmonella in 50 laying hens feces. The method was by taking one colony round shaped and transparent from MCA media, then growth at SSA media, and put at 37°C for 24 hours. Identification test were done to the colony. To ensure that the colony growth at SSA media were Salmonella enteritidis, biochemical tests were done to various media (TSIA, SIM, citrate, urea, and sweets).

Triple Sugar Iron Agar (TSIA) Media

The growth of Salmonella in TSIA media was done by taking Salmonella from pure culture by sterile needle then put it in the bottom of agar, and then media was putted at 37°C for 24 hours. The growth in this media is to evaluate the ability of Salmonella to ferment glucose, sucrose, and the formation of H_2S and gas (Cappucino and Sherman, 1983).

Sulfide Indol Motility (SIM) Media

The growth in SIM media was done by taking Salmonella from pure culture then put it in the half part of agar and the put the media at 37°C for 24 hours. Observation was done by adding chloroform and Kovach reagent, both at the same quantity. Positive result was shown by indol circle (red).

Citrat Agar

The growth in citrate agar was done by streaking in media. The objective of this growth is to identify whether Salmonella uses carbon from citrate. Positive result was shown by the change of color to blue and negative result was shown by the change of color to green.

Urea Agar

Pure culture was taken to streak in media. The objective of this test to identify whether Salmonella produces enzyme that can hydrolyze urea to ammonia. The positive result was shown by the change of media to red color.

P2 : ten laying hens in molting period were treated by unnatural forced molting, by dietary feed for 2 days consecutive without feed and only drink given

P3 : ten laying hens in molting period were treated by unnatural forced molting, by dietary feed for 3 days consecutive without feed and only drink given

P4 : ten laying hens in molting period were treated by unnatural forced molting by dietary feed for 4 days consecutive without feed and only drink given

In the fifth day, it has been checked Salmonella in 50 laying hens feces. The method was by taking one colony round shaped and transparent from MCA media, then growth at SSA media, and put at 37°C for 24 hours. Identification test were done to the colony. To ensure that the colony growth at SSA media were Salmonella enteritidis, biochemical tests were done to various media (TSIA, SIM, citrate, urea, and sweets).

Triple Sugar Iron Agar (TSIA) Media

The growth of Salmonella in TSIA media was done by taking Salmonella from pure culture by sterile needle then put it in the bottom of agar, and then media was putted at 37°C for 24 hours. The growth in this media is to evaluate the ability of Salmonella to ferment glucose, sucrose, and the formation of H_2S and gas (Cappucino and Sherman, 1983).

Sulfide Indol Motility (SIM) Media

The growth in SIM media was done by taking Salmonella from pure culture then put it in the half part of agar and the put the media at 37°C for 24 hours. Observation was done by adding chloroform and Kovach reagent, both at the same quantity. Positive result was shown by indol circle (red).

Citrat Agar

The growth in citrate agar was done by streaking in media. The objective of this growth is to identify whether Salmonella uses carbon from citrate. Positive result was shown by the change of color to blue and negative result was shown by the change of color to green.

Urea Agar

Pure culture was taken to streak in media. The objective of this test to identify whether Salmonella produces enzyme that can hydrolyze urea to ammonia. The positive result was shown by the change of media to red color.

Sweets

The growth in sweets media was done by taking Salmonella the put it in media. The objective of this growth is to identify whether Salmonella ferments sweets (Anonymous, 1999).

Experiment Design and Statistical Analysis

In this present research, complete random design is used. The results were analyzed by Analysis of Variant (ANOVA) and least significant difference 5% level test if there was the different result (Steer and Torrie, 1995).

Results and Discussion

The results of experiments are shown in the table 1.

Table 1 Identification of Salmonella in different treatment samples

Repetition	Treatment				
	Control	P1	P2	P3	P4
1	-	-	+	+	+
2	-	-	-	+	+
3	-	-	+	+	+
4	-	-	+	+	+
5	-	-	+	+	+
6	-	-	-	+	+
7	-	-	+	+	+
8	-	-	+	+	+
9	-	-	+	+	+
10	-	-	-	+	+
Sum	0^a	0^a	7^b	10^c	10^c

- : negative, no Salmonella found

+: positive, Salmonella found

The positive results in the table shown that there were Salmonella enteriditis in the tested feces. It is identified by biochemical test by TSIA, SIM, Citrat agar, urea agar, and sweets methods as shown in table 2.

Table 2. Identification of Salmonella enteridis in different media

Media	Result
TSIA	+
Base	+
Acid	+
H_2S	+
Gas	+
SIM	-
Motility	-
Indol	-
H_2S	+
Citrate	-
Urea	-
Glucose	+
Lactose	-
Manitol	+
Maltose	+
Sucrose	-

According to statistical analysis, one way ANOVA, it was found there was no significant difference ($p<0,01$) between results of control and natural forced molting (α Prl 200 mg/L each hen). Between results of control and P1,P2,P3, there was significant different ($p<0,01$), then it is necessary to analyze with least significant difference in order to determine the most important treatment that influence the existence of salmonella.

Butcher and Miles (2002) found that dietary feed will decrease T cell in blood circulation. By this decrease, it will decrease immune reaction and increase the sensitivity to certain disease. The disease that occurs especially is Salmonella enteritidis. According to Fact (2001), Webster (1999), this disease is very dangerous because it is zoonosis for human.

Salmonella enteritidis, the cause of Salmonelosis, is 1-2,5 micron length and 0,3-0,5 micron width, negative gram, non motile, without spore formation, and no capsule. The optimum growth of Salmonella enteritidis is at 37°C and in Salmonella shigella agar forms segmented colony, clear, and transparent (Hagan and Bruner, 1981).

Salmonellosis is infectious disease that spreads all over the world. Mammalian can be infected by this disease: rabbit, human (Ressang, 1984).

Salmonellosis spreads via oral wit feed, inhalation of polluted air (feather, dust, infected feces). Another way of spreading is congenital via egg (Hosfad, 1984). Factors that enhance the spreading are bad air circulation system, bad sanitation system, bad feed supply, another disease that may give synergic effect (Anonymous, 1981).

Salmonella enteritidis reaches optimum growth at 37°C and aerobic or anaerobic facultative. It can produce H_2S, acid and gas from glucose, ferments manose, but can not ferment lactose. Maltose can be fermented rarely, sucrose not fermented. Salmonella enteritidis does not have urease enzyme and can not use carbon from citrate (Hofad, 1984, Kingscote, 1989).

Isolation of Salmonella enteritidis needs selective media. These media are Salmonella Shigela Agar (SSA), Mac Concey Agar (MCA), and Endo Agar. The growth of Salmonella enteridis in SSA is manifested by colony formation which is smooth, round, transparent, and without color. Diameter of colony is 1 to 4 mm. Salmonella enteridis in TSIA media gives the change of red color (base), yellow (acid), H_2S formation (black), gas formation (burst medium). The growth of Salmonella enteridis in SIM manifested by white color (non motile). Black formation shows H_2S and negative inol test (Jackson and Simmon, 1981, Hofstad, 1984).

The present research gives information to farmers, and people the danger of poultry products produced by unnatural forced molting to overcome molting. Information can be presented in case of Salmonella enteridis, found in laying hens feces.

Conclusion

Unnatural forced molting by dietary feed to overcome molting can cause case of salmonella enteridis which is zoonosis to human.

Daftar Pustaka

Anonimus. 1981. Pedoman Pengendalian Penyakit Hewan Menular Jilid I Cetakan ke-2. Direktorat Kesehatan Hewan. Direktorat Jendral Peternakkan. Departemen Pertanian. Jakarta. 73-80.

Anonimus. 1997. Pedoman Praktikum Bakteriologi. Fakultas Kedokteran Hewan. Universitas Airlangga. Surabaya. 34-35.

Allen T. 2002 . Information Resources on Induced Molting in Chicken 1902-2002. Animal Welfare Information Center. Email: awic@nal.usda.govhttp://www.nal.usda.gov/awic/ Down load : 25 Januari 2004.

Alodan M.A., and Mashaly M.M., 1999. Effect of Induced Molting in Laying Hens on Production and Immune Parameters. Education and Production. Poultry Science. 78:171-177. Down load : 27 Januari 2004.

Avma H.A. 2003 . The Animal Welfare and Food Safety Issues Associated with the Forced Molting of Laying Birds. AVMAHurtsAnimals: Vets Without Hearts. United Poultry Concerns,Inc. UPC.online.org. Down load:20 Pebruari 2004.

Barton J., DVM. 2003. Molting. Palm Beach Country Poultry Fanciers Association. Florida. http://www.metimes.com/issue99-24/eg/chicken.htm.p. 3.

Bell and Kuney. 2003. Forced Molting of Laying. Birds. Poultry Organization. p. 8-10. Poultry.org is an educational effort of Farm Sanctuary. Down load : 2 Maret 2004.

Butcher G.D. and Miles R. 2002. Salmonella Control and Molting of Egg-Laying Flocks-Are They Compatible. University of Florida. Cooperative Extension Service. Institute of Food and Agriculture Sciences. P. 1-3. Down load : 25 Januari 2004.

Cappucino, J.G. and N. Sherman. 1983. Microbiology a Laboratorymanual. Canada. 82-84.

Darmana W. dan M. Sitanggang. 2002. Kiat Mengatasi Permasalahan Praktis. Meningkatkan Produktivitas Ayam Arab Petelur. Cetakan I. Agro Media Pustaka. Jakarta. H.

Fact 2001. Nears Major Food Safety Goal. Chicago IL 60614 (773) 525-4952. PO BOX 14599. Info@FACT.cc.www.fact.cc/se-Main.htm. Down load : 21 April 1004

Hagan , W.A. and D.W. Brunner. 1981. The Infectious Disease of Domestic Animal with Special Reference to Etiolo9gy and Biology Therapy. 3rd Ed. Camstock Publishing Associate, A. Division of Cornell University Press. Thaca. New York. 90-93.

Hosfad, M.S. 1984. Disease of Poultry. 8th Ed. Angus and Robertson. Sidney Melbourne. 231-250.

Indarto, P. 1989. Beternak Unggas Berhasil. Penerbit CV. Armico. Bandung. Hal. 63-69.

Jackson, C.A.W. and G.C. Simmons. 1981. Standard Diagnostic Technique for Salmonellosis. 1st Ed. The Australian Bureum of Animal Health. Australia. 1-10.

Jull, M.A. 1982. Poultry Husbandry. TMH Edition 1972, Reprinted 1982. Tata McGraw-Hill Publishing Company Ltd. New Delhi. 119-149.

Kingscote, B. 1989. Veterinary Microbiology Introduction to Bacteria and Virology. 7th Ed. The Iowa State University Press. Ames. Iowa. USA. 285-309.

Marhiyanto B. 2000. Sukses Beternak Ayam Arab. Cetakan I. Difa Publisher. Indonesia. H. 9-11 & 88-97

Poultry. O. 2003. Forced Molting of Laying. Birds. Poultry Organization. p. 1-7. Poultry.org is an educational effort of Farm Sanctuary. Down load : 2 Maret 2004.

Ressang, A.A. 1984. Patologi Khusus Veteriner. NV. Denpasar. 591-593.

Safitri E. 2005. Metode pembuatan antiprolaktin pada hewan coba kasmbing local sebagai penghambat proses moulting pada ayam ras petelur. Berkala penelitian Hayati. Journal of Biological Researches. 11(1):26-29.

Safitri E., Misaco W., Anwar H. 2008. Penentuan dosis isolate prolaktin hasil purifikasi serum darah itik fase moulting untuk produksi anti prolaktin. Media Kedokteran Hewan. 24(3): 177-182.

Sainsbury D. 1995. Poultry Health and Management; Chicken, Turkey, Ducks, Geese and Quail. 3 Th. Ed. University of Cambride. 195

Steel, R.G.D dan J.H. Torrie. 1995. Principles and procedures of statistics A biometrical Approach. International Student Edition. Me Graw-Hill Koga Kusha, LTD. P. 137-167

Sudarso Y dan Siriwa A. 2001. Ransum Ayam dan Itik. Penebar Swadaya. Anggota ICAPI. Yakarta. Hal. 47-48.

Sukamto R. dan Hendarti, G.A. 2008.Efek torced moulting pada unggas sebagai penyebab kasus zoonosis *Salmonella enteritidis* (*SE*).Veterinaria Medika. 2 (1) : 156-1161

Webster A.B. 1999. Commercial Egg Tip-the Induced Molt: A Critical Control Point for Hazard Minimization of Salmonella Enteritidis Contamination of Eggs. Institute of Agriculture and Natural. Poultry News. Winter 1999. P.2-4. http://ianr.www.snl.edu/ianr/asdk/newslet.htm

--- oOo ---