

Acknowledgement Letter # 157/19

From: Ind Vet Journal (ivj83@yahoo.com)

To: rma_fispro@yahoo.com

Date: Thursday, May 9, 2019 at 03:54 PM GMT+7

ACKNOWLEDGEMENT

Reg. No: 157/19

Dated : 6/05/2019

Dear Dr. Erma Safitri,

We acknowledge the receipt of the following articles entitled "The effect of feeding high level of protein on reproductive performance of Bali starling." (Erma Safitri, et al.).

For any further correspondence, please always quote the Registration Number of the Article.

Editorial Office,
Indian Veterinary Journal,
11 Chamiers Road, Nandanam
Chennai 600035. India
Phone # 91 44 2435 1006
email : ivj83@yahoo.com
Web : www.ivj.org.in

Article # 157/19 for revision & Referee comments & IVJ revised guidelines attached

From: Ind Vet Journal (ivj83@yahoo.com)

To: rma_fispro@yahoo.com

Date: Wednesday, May 29, 2019 at 10:18 PM GMT+7

Sir / Madam,

Revise the paper according to the referee's comments and corrections marked on the manuscript. Resubmit the revised article as per IVJ format for further action.

Sincerely,

Editorial Office,
Indian Veterinary Journal,
11 Chamiers Road, Nandanam
Chennai 600035. India
Phone # 91 44 2435 1006
email : ivj83@yahoo.com
Web : www.ivj.org.in



157-19.pdf

1.5MB



Revised Guidelines.pdf

89.7kB



THE INDIAN VETERINARY JOURNAL

(The Official Organ of the Indian Veterinary Association)

Dr. S. SUKUMAR
MANAGING EDITOR

No.11, Chamiers Road, Nandanam
Chennai – 600 035, India.

ARTICLE NO: 157/19

Date: 24.5.19

Author is requested to note :

- Revise the paper according to the referee's comments and corrections marked on the manuscript.
- Return the original manuscript and the referee's comments sent herewith.
- Resubmit the revised article as per IVJ format – one hard copy and one soft (CD) for each article separately.

EDITOR'S COMMENTS

- 1) Results and Discussion may be presented in an abridged form.
- 2) References should follow IVJ format. Only the name of journal along with vol. no. and page no. should be provided. Website references should be avoided.
- 3) Corrections/deletions/additions/suggestions pointed out may be carried out and revised article as a soft copy submitted as full research article not exceeding 5.6 pages, after going thro' the enclosed IVJ guide lines, for further actions.

To
..... Dr. Erma Sathya

.....
.....
.....


Managing Editor

RETURN THIS PAPER WITH YOUR REPLY WITHIN 90 DAYS

157/19
11
RR 23 5/19

The effect of feeding high level of protein on reproductive performance of Bali starling

Mas'ud Hariadi, Budi Utomo, Herry A. Hermadi, Rezha S.W. Hadi,
Alfian Zulfahmi, Erma Safitri*

Faculty of Veterinary Medicine, Universitas Airlangga, Surabaya, Indonesia, 60115

Abstract

Bali Starling is naturally only found in the western part of Bali Island, as critically endangered species. The research aim was to improve their reproductive performance by feeding various level of protein, ^{like egg production and hatchability} on egg production and hatchability. Twelve pairs of Bali starling were divided into 4 ^{groups} groups of treatments, i.e C (control, commercial feed); T1 (protein 17%); T2 (protein 18%); T3 (protein 19%). Three formulas of feed were made from combination of combinations of Gryllus mitratus, Oecophylla smaragdina's egg, Musa acuminata balbisiana, Zea mays, Arachis Hypogaea, Glycine max, Vigna radiate and fish powder. The result showed T3: 19% protein had better result for productivity and hatchability.

Keywords : Bali starling, ~~Bird feed~~, Fertility, Hatchability, Reproductive performance

Bali Starling (*Leucopsar rothschildi*) is a bird that is very popular among the people because of the beauty of its physical form and brilliant blue eye frame. It was estimated that the population of around 300-900 birds lived in the wild but in 1990 due to wild catching, the number decreased to the remaining 15 birds (Gunawan, 2010). Based Birdlife International data, only 49 individuals are accepted in the wild (Petrus, 2015). In maintaining sustainability while restoring the Bali Starling population, conservation efforts need to be carried out.

Materials and Methods

Experimental animals used ^{twelve} 12 pairs of Bali Starlings were divided feed rations with protein content of 17% (T1), 18% (T2) and 19% (T3), which were compiled from crickets, kroto, ^{used in the experimental} kepok bananas, corn, green beans, soybeans, peanuts and fish meal using a combined method of trial and error and the Pearson square method to obtain protein content, ^{into three treatment} which are expected (Setyono ^{it's} et al., 2012). ^{preparation by using} With control treatment using commercial bird feed (C). The feed ingredients that ^{will} be used as feed ^{and} treatment are analyzed for protein content at the Laboratory of Animal Food Sciences, Faculty of Veterinary Medicine, Airlangga University using the Kjeldhal method. ^{All the treatment were given feed} The treatment process was given after the parent of Bali starch had occupied

the cage and was given treatment 2 times a day, morning and evening. After giving the treatment, it was observed the mating speed and speed of Bali Starling laying eggs (Hasib *et al.*, 2017). After the Bali Starling starch breed and in the data the number of eggs produced, then the egg is put into the hatching machine for 14 days. Data analysis used descriptive method by describing the results of egg production and hatchability of Bali Starling eggs.

Results and Discussion

Nutrient content of bird feed ingredients; The results of the proximate analysis conducted at the Laboratory of Animal Food Sciences, Faculty of Veterinary Medicine, Airlangga University, Surabaya, are listed in Table I

Table I. Nutrient content of bird feed ingredients

Raw Material	Nutrition(%)							
	Dry ingredients	Abu	Crude Protein	Rough Fatty	Rough Fiber	Ca	BETN	ME (Kcal/kg)
Commercial Bird Feed	93.092	9.476	16.375	6.140	10.135	1.905	50.967	2886.693
Kroto	24.892	0.883	14.670	2.560	3.697	0.190	3.083	795.463
Crickets	26.257	1.280	16.283	3.857	4.828	0.591	0.406	846.792
Banana	41.774	0.926	3.554	14.787	2.266	0.712	20.241	1932.645
Corn	88.166	1.578	10.765	2.503	3.442	0.012	69.879	3117.61
Peanuts	92.277	2.174	26.300	12.990	12.727	0.681	38.086	3242.91
Green beans	92.373	3.365	23.453	3.451	4.932	0.183	57.172	3144.90
Soybeans	90.057	4.458	30.702	9.550	11.450	0.385	33.896	2984.92
Fish flour	-	-	44.754	-	-	-	-	-

Source: Laboratory of Animal Food, Faculty of Veterinary Medicine, Airlangga University

From the results of the proximate analysis, the material was mixed with a combined method between the trial method and the Pearson square method to obtain the expected protein levels as listed in Table II.

Table II. Feed ration arrangement in percent / kg of feed

Material	C (Control)	T1 17%	T2 18%	T3 19%
Comercial bird feed	100	-	-	-
Crickets	-	2	2	2
Kroto	-	2	2	2
Banana	-	5	5	5
Fish flour	-	5	5	5

Peanuts	-	5	5	5
Green beans	-	10	10	10
Soybeans	-	14	19	23
Corn	-	57	52	48

Description: Per kg of ration plus 0.06 grams Introvit 4+ ws as a source of vitamins, minerals and amino acids

From the results of research conducted from August to December 2014 at the Safari Bird farm in Kudu village, Kertosono Subdistrict, Nganjuk Regency, East Java, the results listed in table III below are obtained.

Tabel III. Production and Hatchability of Bali Starling Eggs

Treatment	Cage	Egg production	Fertility	Mortality	Hatch	Hatchability
C (Control)	52	0	-	-	-	-
	54	0	-	-	-	-
	63	0	-	-	-	-
T1	55	3	-	-	-	-
	60	2	-	-	-	-
	62	2	-	-	-	-
T2	53	2	-	-	-	-
	57	3	1	1	-	0%
	63	4	2	2	-	0%
T3	58	3	3	2	1	33.3 % ✓
	59	3	3	2	1	33.3 % ✓
	61	3	3	0	3	100 % ✓

From these ^{the} results it can be seen that the ~~third~~ treatment with 19% protein has the best effect of the amount of Bali Starling egg production and hatchability. The third treatment obtained an average egg yield of 3 with all fertilized eggs while the second treatment had an average number of 3 production but not all eggs could be fertilized. The treatment of control does not lay eggs. The third treatment results in an average hatchability of 55.5% compared to other treatments where the eggs fail to hatch.

The results obtained in this study were not significantly different in the amount of egg production because the number of Bali Starling eggs obtained only ranged from 2-4 grains per pair according to the statement of Balen *et al.* (2000). However, this difference would be very significant if this study done in a one-year production period there will be a noticeable difference in the number of eggs produced. In the process of preserving the Bali Starling, the number of eggs produced is not the most important, but the fertilized egg is the main destination for

breeding Bali Starlings. From this study the third treatment had the highest fertility percentage with all the eggs produced successfully fertilized. In the control treatment, it was found that the production yield was 0 because the Bali Starling had no egg-producing control treatment in this study. Because the feed given does not contain balanced animal and vegetable proteins and a small protein value so it cannot produce eggs.

There are several factors that cause treatment 1 and 2 samples to not be fertilized. <sup>due to unbalanced
fw
mating
and unbalanced
sperm</sup> In this treatment sample the marriage of the Bali starlings occurs because the female Bali starlings successfully lay eggs but the eggs are not fertilized so that in this case the male Bali Starling experiences lust so that the error can occur in the fertilization process in the mother's body. The ability of sperm to fertilize here is not observed and it is assumed that all males can fertilize because from the history of the breeders all the samples carried out in this study were reproductive and had reproduced. Williams and Feistner (2006) states that egg fertility is influenced by several factors including sperm quality, parent age, parent nutritional status, marriage time, male-female ratio. This means that food is important for maintaining life (Prasetyo and Safitri, 2016), also for fertility and embryo safety. Dietary deficiencies (nutrition) can result in decreased sperm production, fertility capacity and weakness and even embryonic death (Safitri *et al.*, 2016).

From the opinion above, it is possible that the eggs are not fertilized because the ability of male sperm is reduced because the nutritional factor given is less than the sperm's need to fertilize the female body. Apart from nutritional factors, the influence of inbreeding factors is very large on egg production and fertility because according to interviews with the parent breeder this has been prepared since it was still pious from the results of the same parent hatching so that inbreeding factors greatly influence the parent production of inbreeding.

According to Maynard *et al.* (1984), inbreeding causes egg production, hatchability, and decreased growth rate. The factors that affect hatchability include fertility, and genetic. The genetically hatchability is different because it can be influenced by inbreeding, crossbreeding and incross breeding, lethal and semi-lethal genes and egg production, nutrition, disease and egg selection. Inbreed birds were not worthy of being dispatched because of population genetics and low genetic variation. This will affect the reproductive power, endurance, and appearance of seeds. From the observation of the Bali Starling parent arranged from other captive breeds can

produce a maximum of 4 eggs while the parent of the captive breeding itself only produces 2 eggs so it is not only the nutritional factors that influence egg production in this study.

In the highest hatchability study, the third treatment was obtained with an average value of 55.5%. All eggs produced by the third treatment sample were successfully fertilized but some failed to hatch but failed to hatch this was not due to nutritional factors. Eggs that fail to hatch due to environmental factors and the parent do not ^{care} treat the eggs properly so that when the eggs ^{were} are taken there are cracks in the shells resulting in a decrease in egg laying every day ^{poor hatchability}.

In this study egg quality increased with increasing protein ration level (Shell thickness, Haugh Unit and egg yolk weight percentage). Large eggs and thick shells will experience lower egg shrinkage during hatching so that they can increase hatchability. Thin shells with runny egg contents (low Haugh Unit) result in decreased hatchability. Similarly eggshells and egg yolks are a source of material for embryo development, so increasing eggshell thickness and percentage of egg yolk will increase hatchability (North and Bell, 1990).

The eggs from the second treatment ^{were} are fertilized but the weight of the eggs shrinks for several days because the eggshell is thick so the material in the shell quickly evaporates so the embryo in the egg fails to recover. One of the factors that affect fertility and hatchability of the samples taken is the calcium mineral deficiency that was not considered in this study where from the overall calcium level ration below the minimum requirement of birds.

The main mineral involved in embryonal metabolism is calcium. This mineral source is mainly calcium found in eggshells. In infertile eggs there is no increase in calcium levels in these creepy fertile eggs only possible due to the transfer of eggshells through the shell membrane. If the main food makka mineral deficiency has an impact on the fertility of the eggs produced and affects the formation of the embryo.

^{The} This causes the results in the second treatment ^{to} have a hatchability of 0% because the eggs produced are fertilized eggs but cannot maintain the state of the embryo so that it experiences mortality and fails to hatch ⁱⁿ so the results ^{hatchability} obtained are 0% according to the formula (North and Bell, loc cit).

Calcium deficiency was evidenced by the calculation of the first and second treatment ration formula which was not 0.7% - 0.9% according to the needs of birds ^{singing in} (Setyono *et al.*, ^{italy} (loc cit)). And in the third treatment calcium levels reached 0.7% so that it was sufficient to meet the calcium ^{requirements} starlings of Bali, ^{which results in good hatchability}.

Based on the results obtained, the ration made for the third treatment gets the best results with the right portion and meets the needs of the Bali Starling and has the best influence from the ration for other treatments.

gave the best results on egg production
fertility/hatchability is concerned.

Summary :

Rations with 19% protein affect the amount of egg production produced by Bali Starling more and have high fertility. The diet with 19% protein affects the hatchability of the eggs where all the eggs produced are fertile and hatched, but not only feed that influences hatchability but the influence of climate and the level of parent stress can affect hatchability.

produce more number

also

References

- ✓ Balen, I., Wayan, A., Dirgayusa, I., Made, W., Putra, A. and Herbert, H.T. (2000) Status and distribution of the endemic Bali starling *Leucopsar rothschildi*. *Oryx*. **34(3)**: 188-197.
- ✓ Gunawan. (2010) Kilas Iptek Jalak Bali. <http://www.burung.org/Artikel/kilasiptek-Jalak-ali.html>. (Acces in 09 April 2014).
- ✓ Hasib, A., Muhamad, R., Reksa, T.Y., Artha, A.U. and Safitri, E. (2017). Utilization of Sumbawa tropical forest honey *Apis dorsata* to improve fertility of Indonesia Oriental Magpie Robin (*Copsychus saularis*) as effort animal population increasement. VMIC. The Veterinary Medicine International Conference. DOI 10.18502/kls.v3i6.1190. **2017**: 620-626.
- ✓ Maynard, L.A., Loosli, J.K., Hintz, H.F. and Warner R.G. (1984) Animal Nutrition. 7th Ed, Tata McGraw Hill Publishing Company Ltd. New Delhi, India. 137-143.
- ✓ North, M.O. and Bell, D.D. (1990) Commercial Chicken Production Manual. 4th Ed. Avi Book, Nostrand Reinhold, New York. pp 115-131.
- ✓ Petrus, R. (2015) Jalan panjang melindungi Jalak Bali dari kepunahan (bagian-1). <http://www.mongobay.co.id/2015//10/18>. (Acces in 07 Feb 2018).
- ✓ Prasetyo, R.H. and Safitri, E. (2016) Effects of honey to mobilize endogenous stem cells in efforts intestinal and ovarian tissue regeneration in rats with protein energy malnutrition. *Asian Pac J Rep*. **5(3)**: 198-203.
- ✓ Safitri, E., Utama, S., Widiyatno, T.V., Sandhika, W. and Prasetyo, R.H. (2016) Auto-regeneration of mice testicle seminiferous tubules due to malnutrition based on stem cells mobilization using honey. *Asian Pac J Rep*. **5(1)**: 31-35

Setyono. H., Kusrieningrum,.R., Nurhayati, T., Sidik. R., Al-Arif,. M. A., Lamid,. M. and Paramita, W. (2012) Teknologi pakan hewan. Airlangga University Press, Surabaya, Indonesia. 37-45.

Williams, T.M. and Feistner, A.T.C. (2006) Reproduction of Bali starlings (*Leucopsar rothschildi*) at Durrell Wildlife Conservation Trust, Jersey. *Int Zoo Yearbook*. **40(1)**: 271-289

REVISED GUIDELINES TO AUTHORS

1. **THE INDIAN VETERINARY JOURNAL** (Official organ of the Indian Veterinary Association) publishes papers of original work as full papers, clinical articles and short communications on Veterinary, Animal Husbandry and Fishery Sciences. It also serves as a medium of news regarding the veterinary profession and deals with issues of professional importance from time to time through its editorial columns.
2. **Manuscripts are accepted for publication on the clear understanding that :**
 - a) They have neither been published nor been sent for publication elsewhere. All the authors should sign a certificate to this effect in respect of each manuscript sent for publication. Names, qualifications, full addresses and Email ID of all authors must be provided while submitting the manuscripts. Details of the corresponding author with contact phone and the address of the place with PIN code where the work has been carried out must be clearly mentioned.
 - b) The research work has been carried out with the approval of the Institutional Ethics Committee as per the laws in force in the country in which it has been conducted. A certificate to this effect should be signed by all authors. The authors should get written permission from concerned authorities for publishing manuscripts on emerging and exotic diseases.
 - c) All authors are jointly and severally responsible to the various authorities for the contents of the manuscripts. The Editorial Committee shall not be held responsible in any manner whatsoever to the contents of the manuscript and the views and interpretations expressed by the authors in the manuscripts. All disputes regarding any legal proceeding pertaining to the journal shall be within the jurisdiction of the High Court of Judicature at Chennai.
3. **A processing fee of each ₹. 200/- for Indian and US\$ 20 for foreign manuscript** must be sent along with the manuscript in the form of a DD or International Cheque drawn in favour of **The Editor, Indian Veterinary Journal, payable at Chennai. Payment of processing fee will not ensure publication of the manuscript.** On acceptance of the manuscript for publication, a Publication Charge (₹. 700/- for an Indian manuscript and US\$ 200 for a foreign manuscript) must be sent to The Editor.
4. It is mandatory that each Indian author should be a subscriber to the **print or online version** and a foreign author, to the online version of the Journal. The annual subscription fee is ₹. 700/- for the Indian subscriber and US\$ 200 for the foreign subscriber for the **print or online version** of the Journal.
5. Manuscript should be typed in A 4 size paper in double space with 12 pt size Times Roman font as per the Indian Veterinary Journal format. Only two hard copies must be sent to **the Editor, Indian Veterinary Journal, 11/7, Pasumpon Muthuramalinga Thevar Road (Chamiers Road), Nandanam, Chennai – 600035, India.** Clear prints of figures and photographs in duplicate if any must be sent in glossy print of maxi size.
6. **The decision of the Editor is final in all matters pertaining to the publication of the manuscripts.** Editor has the right to do editorial revision of the accepted manuscripts, restriction of number of pages, tables and figures. No reason shall be given for the non-acceptance of the manuscript. Manuscript once received will not be returned to the author under any circumstances. The copy right shall rest with the Journal and no part of any manuscript shall be reproduced without specific permission of the Editor.
7. Each manuscript received will be allotted a **Registration Number**. The authors, while sending the revised version of the manuscript based on the comments of the referee, should submit the revised manuscripts in two forms, one hard copy and other one soft copy in CD. This should be as per IVJ format and return the original version along with original comments to the Editor for reference and records. The revised manuscripts should be submitted to the IVJ office within 90 days of receipt, failing which the article will not be considered for publication. A demand letter will be sent to the corresponding author for payments such as processing fee (if not already paid), publication charges and arrears of subscription fees. **Only on receipt of full clearance of all the payments and the soft copy in CD, the concerned article will be taken up for publication** and the author will be informed accordingly.
8. After publication of an article the original / revised copy of the article will be retained at the IVJ office only for a period of 12 months after which the article will be disposed off, since the published version will be available in print and digitized form.
9. Indian Veterinary Journal Format:
 - a) Title; Author(s); Place of work with full address and pin code.
 - b) **Full papers:** Abstract (not more than 100 words), Keywords (not more than 4 words), Introduction (with no subtitle), Materials and Methods, Results and Discussions, Summary, Acknowledgement (optional) and References (not exceeding 15). The full papers should not exceed 4 printed pages.
 - c) **Clinical articles :** Abstract (not more than 100 words), Keywords (not more than 4 words), Introduction (with no subtitle), Case History and Observations, Treatment and Discussion, Summary, Acknowledgement (optional) and References (not exceeding 15). The Clinical articles should not exceed 3 printed pages.
 - d) **Short Communications:** There is no specific format for Short Communication. Articles which do not comply to either Full Papers or Clinical Articles either on quality basis or on page-wise basis will be allotted under Short Communication.
 - e) The page limits are inclusive of figures, photographs and tables.
 - f) All tables should be numbered with upper case roman numerals (I, II...) and all figures should be numbered with arabic numerals (1, 2, 3...).
9. **Citing references:** In the text, references should be cited by names of the authors followed by the year of publication in parenthesis. In case of more than two authors, the name of the first author must be followed by *et al.* For the references repeated in the text, the year must be replaced by *loc cit.* in successive references. At the end of the text, the references must be furnished in alphabetical order. Each author's name must be followed by initials. Before the name of the last author, the word 'and' must be included. The year of publication must be in parenthesis. The title of the referred article must be given in full. The Journal's name must be in approved abbreviated form and must be in italics. The volume number of the journal must be given in bold letters. It should be followed by a colon and the starting and ending page numbers. While citing books, the Title of the book, Year, Publisher, Place of Publication, Number of the Edition and the relevant page number(s) must be provided. Website, 'in press' and 'personal communication' should be avoided as references.
10. All correspondence regarding the status of the articles must be made with The Editor, Indian Veterinary Journal at the Official Address of the Journal.

THE INDIAN VETERINARY JOURNAL
(The official organ of the Indian Veterinary Association)

Dr. S. SUKUMAR
Managing Editor
11/7. Muthuramalinga Thevar Salai
Chamiers Road
Nandanam. Chennai .600035

Phone : 91 44 2435 1006
E Mail : ivj83@yahoo.com
Online : www.ivj.org.in

DEMAND LETTER Dated 13/06/2019

Dear **Dr. Erma Safitri.**,
We wish to inform that the under mentioned article has been accepted for publication (157/19)
“**The Effect of Feeding High Level of Protein on Reproductive Performance of Bali Starling.**”

Please remit a sum of **USD 220** towards the following charges drawn in favour of the “Editor, Indian Veterinary Journal” and payable at Chennai.

The money may be transferred into our Bank A/c # **30281291710 Code : 09581** of **State Bank of India, Nandanam Branch, Chennai-600035, India**. The money should be transferred in favour of The Editor, Indian Veterinary Journal, Chennai. Under intimation to the Editor, IVJ.

SBI ACCOUNT DETAILS :

SWIFT CODE : SBININBB455; BANK A/c # 30281291710; BRANCH Code : 09581

RTGS CODE : SBIN0009581; MICR CODE : 600-002-088

INVOICE:

Processing Fee	\$ 20
Publication Charge	\$ 200
Subscription charge for (12 issues)	\$
Postage	\$
Total	\$ 220

**On receipt of the amount, acceptance letter and date of publication will be sent to you
Quote the Registration number of the article along with payment**

Corresponding Address:

Dr. Erma Safitri
Faculty of Veterinary Medicine,
Universitas Airlangga, Indonesia
E-mail : rma_fispro@yahoo.com

Publication Address:

Dr. Erma Safitri
Faculty of Veterinary Medicine,
Universitas Airlangga, Indonesia
E-mail : rma_fispro@yahoo.com

Sd/-
(S. SUKUMAR)
Managing Editor
INDIAN VETERINARY JOURNAL

Acceptance Letter # 157/19

From: ivj83@yahoo.com

To: rma_fispro@yahoo.com

Date: Friday, June 21, 2019 at 11:15 AM GMT+7

Sir / Madam,

The following article has been accepted and will be published in OCTOBER, 2019 issue of Indian Veterinary Journal

Editorial Office,
Indian Veterinary Journal,
11 Chamiers Road, Nandanam
Chennai 600035. India
Phone # 91 44 2435 1006email : ivj83@yahoo.comWeb : www.ivj.org.in



IVJ Acceptance Letter - 157-19.docx
785kB



THE INDIAN VETERINARY JOURNAL

(The Official Organ of the Indian Veterinary Association)

Dr. S. SUKUMAR
MANAGING EDITOR

No.11, Chamiers Road, Nandanam
Chennai – 600 035, India.

Dated : June 21, 2019

ACCEPTANCE LETTER

The following article has been accepted and will be published in **OCTOBER, 2019** issue of Indian Veterinary Journal.

Article No.	Title	Author (s)
157/19	The Effect of Feeding High Level of Protein on Reproductive Performance of Bali Starling	Mas'ud Hariadi, Budi Utomo, Herry A. Hermadi, Rezha S.W. Hadi, Alfian Zulfahmi, Erma Safitri

Sd/-

**Managing Editor,
Indian Veterinary Journal**

To,

Dr. Erma Safitri
Faculty of Veterinary Medicine,
Universitas Airlangga, Indonesia
E-mail : rma_fispro@yahoo.com

***THIS IS A COMPUTER GENERATED APPROVED ACCEPTANCE LETTER AND
REQUIRES NO SIGNATURE***