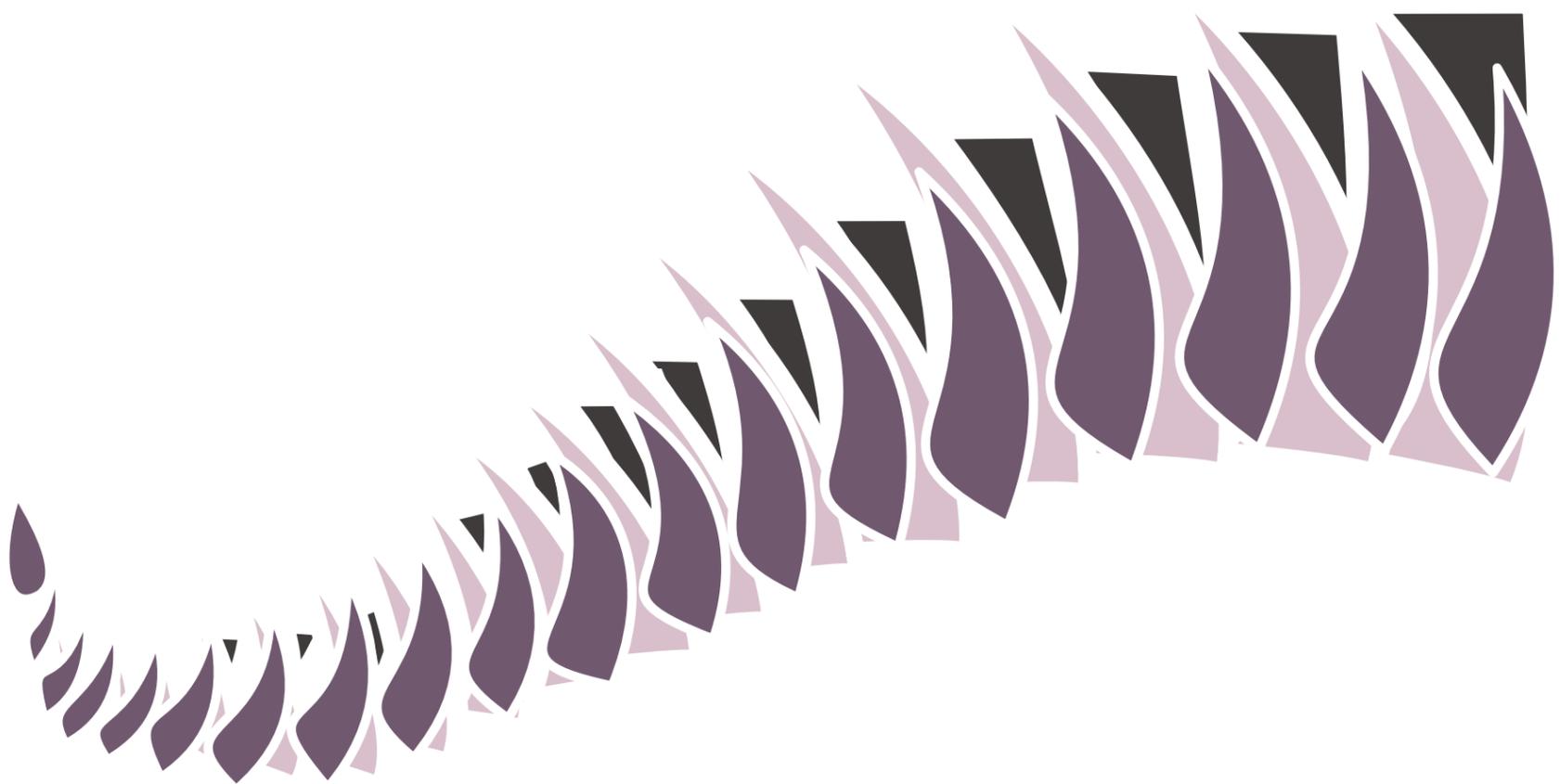


# Journal of

# the Indonesian Tropical Animal Agriculture

J. Indonesian Trop. Anim. Agric.  
pISSN 2087-8273 eISSN 2460-6278  
Accredited No. : 81 / DIKTI / Kep / 2011

**Vol. 40 No. 1 March 2015**



Jointly Published by Faculty of Animal and Agricultural Sciences- Diponegoro University  
and

Indonesian Society of Animal Agriculture (ISAA)

# Journal of the Indonesian Tropical Animal Agriculture

## J. Indonesian Trop. Anim. Agric.

pISSN 2087-8273 eISSN 2460-6278

- Editor-in-Chief* : Edy Kurnianto
- Vice Editor-in-Chief* : Agung Purnomoadi
- National Editorial Board* : Agus Setiadi [Diponegoro University]  
Akhmad Sodik [Jenderal Soedirman University]  
Anang M. Legowo [Diponegoro University]  
Bambang Ali Nugroho [Brawijaya University]  
Budi Indarsih [Mataram University]  
Cece Sumantri [Bogor Agricultural University]  
Daud Samsudewa [Diponegoro University]  
Diding Latipudin [Padjadjaran University]  
Edi Suryanto [Gadjah Mada University]  
Edjeng Suprijatna [Diponegoro University]  
Edy Rianto [Diponegoro University]  
Jerry F. Salamena [Pattimura University]  
Joelal Achmadi [Diponegoro University]  
Karno [Diponegoro University]  
Krisna Agung Santosa [Gadjah Mada University]  
Lily Warly [Andalas University]  
Mukh Arifin [Diponegoro University]  
Mulyadi [Papua State University]  
Ni Wayan Kurniani Karja [Bogor Agricultural University]  
Nyoman Suthama [Diponegoro University]  
R. Djoko Sutrisno [Gadjah Mada University]  
Suci Paramitasari Syahlani [Gadjah Mada University]  
Sugiharto [Diponegoro University]  
Sumiati [Bogor Agricultural University]  
Susanto Prawirodigdo [Assessment Institute for Agricultural Technology]  
Sutaryo [Diponegoro University]  
Urip Santoso [Bengkulu University]  
Yon Soepri Ondho [Diponegoro University]
- International Editorial Board* : Abdulmojeed Yakubu [Nasarawa State University, Nigeria]  
Arda Yildirim [Gaziosmanpasa University, Turkey]  
Chalong Wachirapakorn [Khon Kaen University, Thailand]  
Takuro Oikawa [University of the Ryukyus, Japan]  
Sumeet Sharma [University of Alberta, Canada]  
Vincenzo Tufarelli [University of Bari 'Aldo Moro', Italy]  
Wan Zahari Muhamed [Universiti Malaysia Kelantan, Malaysia]
- Managing Editor* : Titik Ekowati  
Retno Adiwinati



**Editorial Address:**  
Journal of the Indonesian Tropical Animal Agriculture  
Faculty of Animal and Agricultural Sciences, Diponegoro University  
Campus Drh. Soejono Koesoemowardojo  
Tembalang - Semarang 50275 INDONESIA  
Phone/Fax : 024 - 7474750  
JITAA E-mail: [jppt.fpundip@gmail.com](mailto:jppt.fpundip@gmail.com)  
ISAA E-mail: [isaa\\_ina@yahoo.com](mailto:isaa_ina@yahoo.com)  
JITAA Website: [www.jppt.undip.ac.id](http://www.jppt.undip.ac.id)  
ISAA Website: [www.isaa.undip.ac.id](http://www.isaa.undip.ac.id)



The front cover illustrates the sketch of leaves and seeds of legume and grass forming a buffalo's horn (designed by Agung Purnomoadi)

# **JOURNAL OF THE INDONESIAN TROPICAL ANIMAL AGRICULTURE**

## **History**

MEDIA was the first academic bulletin at Faculty of Animal Science and Fisheries, Diponegoro University in 1975. Along with the development of livestock and fisheries field in the faculty, the faculty was splitted into the Faculty of Animal Science and Faculty of Fisheries. Consequently, there was a change of the journal name from MEDIA to Jurnal Pengembangan Peternakan Tropis (JPPT) in 1998.

JPPT awarded accreditation at the first time in 1999 by Directorate General of Higher Education, Republic of Indonesia. The accreditation was obtained every three years until 2011. JPPT is published on March, June, September and December.

JPPT was awarded the internationalization grant from 2009 to 2011. Consequently, JPPT no longer publish's articles in Indonesian, but all articles have been published in English since September 2009. The name of JPPT, therefore, was changed officially to Journal of the Indonesian Tropical Animal Agriculture (JITAA) in 2009.

JITAA was accredited again in 2011 for a period of five years since November 15, 2011 with No 81/DIKTI/Kep/2011. JITAA as the open access journal has been indexed by Directory of Open Access Journal (DOAJ), Google Scholar, CAB International, EBSCO, Index Copernicus International and Indonesian Scientific Journal Database (ISJD).

## **Aims and Scopes**

Journal of the Indonesian Tropical Agriculture (JITAA) is a peer-reviewed publication devoted to disseminate all information contributing to the understanding and development of animal agriculture in the tropics by publication of original research papers. The journal covers all aspect relating to animal agriculture, including animal breeding and genetics, animal feeding and nutrition, animal reproduction, animal biotechnology, animal physiology, animal production and technology, animal products technology, animal management and economics, animal products processing and animal by-products, animal microbiology, livestock farming systems, and other related topics in relation to animal science.

## **Publication Ethics and Malpractice Statement**

### **SECTION I: Publication**

1. All submitted manuscript are reviewed by at least two reviewers who expertise in their subject.
2. The originality, soundness, novelty and language are factors that are taken into account in review by reviewers.
3. The results of review are categorized into eligible to publish in Journal of the Indonesian Tropical Animal Agriculture (JITAA) without revision, eligible to publish in JITAA with minor revision, eligible to publish in JITAA with major revision, and rejection.
4. If authors are encouraged to revise and resubmit a manuscript, then there is no guarantee that the revised submission will be accepted.
5. Rejected manuscript not be re-reviewed.

### **SECTION II: Editor**

1. Editors have full responsibility and authority to reject/accept an manuscript.
2. Editors should guarantee the quality of the papers published in JITAA.
3. Editors should provide all information needed by aauthors to improve the publication.
4. Editors should preserve the identity or anonymity of reviewers.
5. Editors should publish errata page when needed.
6. Editors should not allow any conflicts of interest among authors, reviewers and board members.

### SECTION III: Authors

1. Authors have to certify that the manuscript has not previously been published or is not being considered for publication elsewhere.
2. Authors have to certify that manuscript submitted is free from plagiarism.
3. Authors state that experiment conducted is according to national, international or applicable regulations for conducting scientific research.
4. Authors have to follow the rule of guideline of JITAA.
5. Authors state that all data analyzed are real.

### SECTION IV: Reviewers

1. Reviewers should evaluate a manuscript solely on academic merits, in which if a conflict of interest is detected it should be immediately notified to the editor.
2. Reviewers have to keep all information relating to the manuscript reviewed.
3. Reviewers should review a manuscript objectively.
4. Reviewers should notify clearly on unclear statement written by authors.
5. Reviewers should not review manuscripts in which they have conflicts of interest resulting from competitive or relationships with any of the authors.
6. If plagiarism is detected, reviewers should notify the editors immediately.

## CONTENTS

|  |         |
|--|---------|
| Single Nucleotide Polymorphisms of Lipoprotein Lipase Gene and Its Association with Marbling Quality in Local Sheeps - <b>Hidayati, C. Sumantri, R. R. Noor, R. Priyanto and S. Rahayu</b>               | 1 - 10  |
| The Nutritive Values of PUFA-Concentrate Supplemented with Yeast and <i>Curcuma xanthorrhiza</i> Roxb Stored in Several Weeks - <b>E. Sulistyowati, A. Sudarman, K. G. Wiryawan and T. Toharmat</b>      | 11 - 22 |
| Effect of Material and Fermentation Time on Quality and Digestibility of Complete Feed, Average Daily Gain of Bligon Goat and Farmer's Income - <b>B. Suwignyo, L.L. Munawaroh and I.G S. Budisatria</b> | 23 - 30 |
| Effect of Crude Palm Oil (CPO) Protected by Formaldehyde on Physical and Chemical Quality of Lamb - <b>N.C. Tiven, L. M. Yusiati, Rusman and U. Santoso</b>  | 31 - 36 |
| Interactive Effect of Cage Density and Dietary Black Cumin Level on Productive Efficiency in Broiler Chickens - <b>L. D. Mahfudz, Nurfaizin, U. Atmomarsono and N. Suthama</b>                           | 37 - 44 |
| Fresh-water Green Algae ( <i>Chlorophyta</i> ) as a Natural Pigment for Mojosari Ducks - <b>B.Indarsih, Asnawi and D.K. Purnamasari</b>  | 45 - 51 |
| Detection of Oxytetracycline in Broiler Chicken Meat Marketed in Several Cities in Java Island using Enzyme-Linked ImmunoSorbent Assay (ELISA) Method - <b>R. Widiastuti and Y. Anastasia</b>            | 52 - 58 |
| A Study on the Use of Fecal Characteristics for Feed Digestibility Determination in Goat - <b>S.A.B. Santoso, G. Puspitasari, A. Muktiani, Sunarso and A. Purnomoadi</b>                                 | 59 - 67 |
| Author Index   | 69      |
| Acknowledgment   | 69      |

*Journal of the Indonesian Tropical Animal Agriculture [JITAA-pISSN 2087-8273 and eISSN 2460-6278, formerly Jurnal Pengembangan Peternakan Tropis-JPPT] is accredited by Directorate General of Higher Education – Ministry of National Education, Republic of Indonesia No. 81/DIKTI/Kep/2011.*

*JITAA is jointly published by Faculty of Animal and Agricultural Sciences - Diponegoro University and Indonesian Society of Animal Agriculture on March, June, September and December. All rights reserved.*

*JITAA is member of Directory of Open Access Journals (DOAJ), indexed by Google Scholar, CAB International, EBSCO, Index Copernicus International and Indonesian Scientific Journal Database (ISJD).*

*The journal receives original papers in animal agriculture which should not have been previously published or is not being considered for publication elsewhere.*

*The annual subscription is IDR 250.00 for domestic and US\$ 30.00 for overseas per year included mailing cost.*