

Estimating Yield Grade by Using Body Measurements and Body Condition Score in Thin-Tailed Sheep

by Endang Purbowati

Submission date: 26-Mar-2021 09:42AM (UTC+0700)

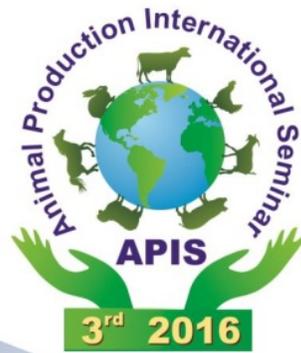
Submission ID: 1542621363

File name: C25_Ulia_dkk_Hal_68-72_,_PROCEEDING_APIS_2016_Malang.pdf (7.83M)

Word count: 8137

Character count: 61487

PROCEEDING



The 3rd Animal Production International Seminar
The 3rd ASEAN Regional Conference on Animal Production
3rd APIS & 3rd ARCAP – 2016

Enhancing Synergistic Roles of Stakeholders
for Development of Sustainable Livestock Production



ISBN : 978-602-432-017-1

53

Perpustakaan Nasional: Katalog dalam Terbitan (KDT)

Proceeding 3rd Animal Production International Seminar (3rd APIS) & 3rd ASEAN Regional Conference on Animal Production (3rd ARCAP)

36

© UB Press

Cetakan Ketiga, 2016

Hak Cipta dilindungi Undang-Undang
All Right Reserved

Penulis : Dr.Ir. Marjuki, M.Sc (Ed.)
Aswah Ridhowi, M.Sc (Ed.)
Wike Andre, M.Si (Ed.)

40

Perancang Sampul : Tim Prosiding
Penata Letak : Tim UB Press
Pracetak dan Produksi: Tim UB Press

Penerbit:



UB Press

Jl. Veteran 10-11 Malang 65145 Indonesia

Gedung INBIS Lt.3

Telp : 0341-554357, Fax: 0341-554357 (call)

E-mail : ubpress@gmail.com/ubpress@ub.ac.id

Website : <http://www.ubpress.ub.ac.id>

16

ISBN: 978-602-432-017-1

viii +724 hlm, 21 cm x 29,7 cm

*Dilarang keras memfotokopi atau memperbanyak sebagian atau seluruh buku ini
tanpa seizin tertulis dari penerbit*

RECTOR SPEECH

Assalamualaikum warohmatullahi wabarakatuh
Distinguished Guests and Delegates, Ladies and Gentlemen,

It gives me great privilege and pleasure to extend to you all a very warm welcome on behalf of Brawijaya University and to say how grateful we are to the organizing committee of The Third Animal Production International Seminar (3rd APIS) and The Third ASEAN Regional Conference on Animal Production (3rd ARCAP) who made this important event happening from today onward. Your attendance in this conference will not be enough before exploring the serendipity of Batu city which has attracted so many visitors in the recent years. It offers you many attractive places to visit varying from leisure facilities to smallholder dairy farms that relevant to the topic of this conference.

The issues of livestock production and food security have been a hot topic of debates all over the world to challenge our capability to feed human population living on earth that is believed will reach 25 billion people by the middle of this millennium. The global call on quality human resources especially in developing countries may not be achieved without adequate supply of animal protein. This has urged animal scientists to make significant effort to increase animal production by inventing new technologies and approaches but have no negative impact on our natural resources because the majority of smallholder farmers face with scarcity of cultivable land to produce adequate quantity and quality fodder for their animals. The practice of uncontrolled fodder scavenging from forest and open land may provoke a serious natural disaster such as landslide, flood and loss of water resources for human beings. Through this stage I would like to extend my concern to all distinguished guests and delegates to pay more attention on sustainable development of animal production that assures our young generation lives on earth safely and happily.

As the rector of Brawijaya University, I am also delighted to welcome you in our green campus sometime in the middle of the conference to hasten mutual collaboration between Brawijaya University and either national or international partners. We are fully aware that in a modern life higher education quality should be built on the basis of collaboration for many reasons. Brawijaya University has 14 faculties that can be grouped into four science trees, that is engineering, humanity, economics, and life sciences. They have been growing significantly not only in the number of student enrollments but many prestigious achievement on research findings, student competitions and administrative transparency are our flagships in the last ten years. Nevertheless, we also realize that first and foremost constraint for any institution is the limit of resources and thereby underpinning the importance of establishing mutual collaboration. It is our opportunities to meet delegates from varying places of origin that open initial discussion for further networking on relevant topics of interests concordance to the main topic of this conference and beyond.

To conclude my address, once again I would like to express my sincere gratitude to all delegates, partners and conference committee who have made this important international conference occurs. I do hope that your stay and participation in these seminar and conference will be fruitful and unforgettable.

By the name of Almighty Allah Swt. I declare that The Third Animal Production International Seminar (3rd APIS) and The Third ASEAN Regional Conference on Animal Production (3rd ARCAP) are officially open.

Thank you very much
Wassalamualaikum warohmatullahi wabarokatuh.

Batu, 19 October 2016
Brawijaya University
Rector

Prof.Dr.Ir. Mohammad Bisri, MS.

FOREWORD DEAN THE FACULTY OF ANIMAL HUSBANDRY BRAWIJAYA UNIVERSITY

Assalaamu'alaikum wr. wb.

Praise be to Allah, that the International Seminar 3rd-APIS could be held this year. This seminar is a routine agenda of the Faculty of Animal Husbandry UB held every three years, and this time held on October 19 to 21, 2016.

For participants come from outside the city of Malang, I proudly would like to say Welcome to the city of Malang and also on the beautiful campus of the University of Brawijaya, especially in the Faculty of Animal Husbandry. I'm sure the cool atmosphere of Malang and Batu, the participants will be able to feel a distinct impression and more enthusiastic in participating in the seminar

When we viewed from a trip APIS, we note that there is significant progress in every APIS's event. It can be noted by increasing the number of participants who submit their abstract / full paper and spread of country or university / institution they came from. This shows that the APIS is increasingly recognized by the researchers or academics community, and but on the other hand might be the number of researchers who want to publish scientific work is also increased.

Now, APIS not only belong to the Faculty of Animal Husbandry University of Brawijaya, but also belong to the universities and researchers in the world who require publish their qualified scientific paper immediately.

APIS is a very effective medium to introduce each other between researchers, as well as a very efficient medium for the information and experiences exchange among the participants. Through the APIS we can know the topics of research being conducted by other researchers in different regions or countries, so that we can develop our future research directions and topic. We can also use APIS meeting as a medium for constructing the research collaboration and networking with researchers from other institutions for strengthening our research foundation. By APIS meeting, some information about new and important problems in the livestock farming and their solutions in the field can be summarized, so it is be expected to be able to overcome some of the problems of animal farming. I am sure, that the scientific information presented in APIS are very important way out of various scientific problems and in practical condition. So that by referring to the new findings of the researchers stated in their scientific works will be able to immediately increase the efficiency of farm businesses and increase in profits for farmers.

Finally, we congratulate to have nice conference and wish all participants having good days for a better future.

Thank you,
Malang, October 13, 2016

31
Dean of the Faculty of Animal Husbandry
University of Brawijaya

Prof. Dr.sc.agr. Ir. Suyadi, MS.

WELCOME MESSAGE

Following the success of the First and Second Animal Production International Seminar (1st and 2nd APIS) held in 2010 and 2013, respectively, and based on the proposition during the International Representatives Steering Committee Meeting, The ASEAN Regional Conference on Animal Production (ARCAP) Committee, and Malaysian Society of Animal Production (MSAP), hence, it will be held Collaborative Seminar of The Third Animal Production International Seminar (3rd APIS) and The Third ASEAN Regional Conference on Animal Production (3rd ARCAP) at Shining Batu city, East Java Province, Indonesia from 19 to 21 October 2016 with the theme of Improving the Synergistic Roles of Stakeholders for Development of Sustainable Livestock Production.

Sustainable development has become globally interesting issue in the last decades, since the environmentally failure of green revolution in agriculture and in some other aspects of development. The developments have been blamed to result in environmental degradation and global climate change (global warming) that dangers for the sustainability of life. Hence, the concept of sustainable developments that are environmentally, economically, socially and finally lively friendly must be practiced in all aspects of development, and as a never ending process to result in the most promising outputs for either the present or the future sustainable lives.

Livestock production is very well known to have very important and strategic roles for human life as well as the environment. Livestock production is as important source of high quality foods for human, where its requirement must continuously increase and cannot be stopped due to the continuous increase of the human population. Livestock production provides income for most of small farmers in the villages and industries. Livestock also functions as traction, fertilizer, investment or saving, social prides, wool, and fur. However, livestock production has recently been blamed for its contributions to the land degradation and the global climate changes. Livestock production has been blamed to degrade 70% of rain forest area in Amazon, contributes 18% of green house gas, and competing in the use of potential materials either for human food or renewable fuel.

Thus, to improve the important and strategic functions and contributions of livestock production, it is our great honors and pleasures to invite stakeholders in livestock production including scientists, practitioners, decision makers as well as farmers and industries to attend This 3rd Animal Production International Seminar (3rd APIS) and The Third ASEAN Regional Conference on Animal Production (3rd ARCAP) held in the most interesting agriculture complex and exotic tourism city of Shining Batu, East Java Province, Indonesia from 19 to 21 October 2016. The Shining Batu city that is located in the valley of nonactive volcanoes complex, is also known as the oldest dairy cattle production center in Indonesia and also as livestock production center where small, medium, and large scale of livestock production and industries present including dairy cattle, beef cattle, goat, sheep, poultry, pigs, and rabbits.

The seminar is supposed to be a chance for the participants to discuss and exchange the newest information on animal science and technology for improving the prospects and coping the challenges in animal production for its sustainable development. In addition, the seminar will be as a site in establishing and refreshing contacts among animal scientists as well as practitioners for the development of sustainable livestock production.

We strongly expect your active support and participation for the success of the seminar. Finally, we are looking forward to seeing you all in the most interesting city of Shining Batu and enjoying our wonderful traditions, cultures, cuisines, and scenery.

SPEECH FROM CHAIRMAN OF APIS 2016

Bismillahirrohmaanirrohiim

Assalamualaikum wa rohmatullahi wa barokaatuh

Our sincerely Rector of Brawijaya University, Dean of Faculty of Animal Husbandry Brawijaya University, very important invited person, keynote speakers, and all of the participants,

In this opportunity, on behalf of the Organizing Committee, I would like to express my deeply thanks and welcoming all of you to attend this Third Animal Production International Seminar and The Third ASEAN Regional Conference on Animal Production (APIS & ARCAP-2016).

The theme of this seminar is **Improving the Synergistic Roles of Stakeholders for Development of Sustainable Livestock Production**. As all of us are aware that sustainable development in all of aspects of our live are very-very important to create a better live not only for ourselves generation but also more importantly for our next-next-next generations. Especially for the development of livestock production, it is not only targeted for the production of sufficient quantity of good quality foods including meat, milk, and egg but also to minimize its contribution to the degradation of environment. As it is very well known that livestock production is not only produce many fruitful functions our live but also has been blamed to cause land degradation, water and air pollution, and to contribute to the global climate change.

For those from this seminar we would like to expect that we can give and share our knowledge, technology, and experiences to give our contribution for the development of sustainable livestock production.

As I got the data from our secretary that this seminar is attended by not less than 300 participants from many different countries including Sudan, Iran, Sri Lanka, India, Thailand, Taiwan, Malaysia, Australia, and of course from all over Indonesia from North Sumatera to West Papua; from different discipline of livestock production including livestock production systems, feeds and nutrition, genetic, breeding, and conservation reproduction, environment and waste management, products processing and food safety, socio-economic and agribusiness of livestock, and veterinary and health care; and from different types of stakeholder including scientists, practitioners, decision makers as well as farmers and industries. For those, I would like again to express my deeply thanks to all of the participants. Please, enjoy our seminar and our most interesting city of Shining Batu and enjoying our wonderful traditions, cultures, cuisines, and scenery.

And finally, last but not least, I wish to thank to all sponsors who have contributed for financial support, to our partner institutions and especially to the organizing committee member who have been working very hard to prepare and ensure the success of this international seminar.

Good Luck and Wassalamualaikum wa rohmatullahi wa barokaatuh.

Chairman

Dr.Ir. Marjuki, M.Sc.

WELCOME SPEECH FROM MSAP PRESIDENT

Welcome Speech From MSAP President

It is indeed my pleasure to welcome you to the 3rd ARCAP (Asean Regional Conference on Animal Production) to be held in the Shining City of Batu, Malang from 19th – 22th October 2016. Malaysian Society of Animal Production is proud to be a co-organizer of this conference. ARCAP was mooted by the then president of MSAP Dr Abu Hassan Muhammad Ali, in 2013 and the first ARCAP conference was held in Kuching, Sarawak in June 2014. Representatives from Malaysia, Indonesia, Thailand, The Phillipines, Vietnam, Singapore, Laos and Myanmar were among the invited speakers. Brunei and Cambodia has yet to name their representatives. ARCAP was originally planned to be held every two years in different Asean countries but initially this system was not practical as some member countries were not represented during earlier meetings. The formation of ARCAP was to develop a network within the Asean region, providing a platform where scientists and livestock stakeholders can discuss, collaborate and exchange ideas and information on animal production specific to this region. At present ARCAP is somewhat a loose organization of societies of animal production in the Asean region and therefore look forward to receiving voluntary members to be actively involved. MSAP organized the first and second ARCAP conferences, and fortunately the Faculty of Animal Husbandry, Universitas Brawijaya, has volunteered to organize the 3rd ARCAP conference in Batu, Indonesia in conjunction with their 3rd APIS. It is hoped that future ARCAP conferences will be will be hosted by other member countries.

Before I end, I would like to thank the organizing committee, and all those involved, for their hard work to make this joint conference a success. Thanks are due to Faculty of Animal Husbandry, Universitas Brawijaya, for providing all the necessary facilities and support for the success of this conference.

Last but not least, I would like to thank all participants of this conference for your support and enthusiasm and hope that you have a fruitful and enjoyable conference.

Prof Dr Abd Wahid Haron

President MSAP 2016/2017

LIST OF CONTENT

RECTOR SPEECH	3
FOREWORD DEAN THE FACULTY OF ANIMAL HUSBANDRY	5
WELCOME MESSAGE	6
SPEECH FROM CHAIRMAN OF APIS 2016	7
WELCOME SPEECH FROM MSAP PRESIDENT	8
CONGRESS COMMITTEE	9
OUTLINE OF THE CONGRESS	12
ACKNOWLEDGMENTS	13
PONSORS	14
GENERAL INFORMATION OF BATU	15
GENERAL INFORMATION OF THE CONGRESS	17
OPENING/ CLOSING CEREMONIES	19
PRORGAM DETAIL	20
INFORMATION AND CONFERENCE DETAILS	23
GUIDELINE FOR POSTER PRESENTATION CONFERENCE	25
ORAL PRESENTATION PROGRAM	26
LIST OF CONTENT	55

Keynote Speakers Presentation

38	
(KS-1)	Review of Researches for Development of Sustainable Livestock Production..... 66
(KS-2)	Breeding Program of Local and Imported Beef/Dairy Cattle Breed for Development of Sustainable Livestock Production 72
(KS-3)	Current Analysis on Beef Self Sufficiency Program in Indonesia 78
(KS-4)	Current Development Trends in Global Broiler Production 79
(KS-5)	Feeding Management of Ruminant Animals to Reduce Their Contribution for Gas Emission 85
(KS-6)	Manipulation of Ruminal Fermentation and Methane Mitigation by Feeding Management: Strategic Success Keys for Smallholder Dairy Farm with Environmentally Friendly 88

Oral Presentation 1 Focus Session: Feed and Nutrition (1)

12	
(FN-392)	Smallholder dairy cattle farmer capacity in providing feeds and nutrient in several population densities of villages of Sleman Regency DIY Province – Indonesia 95
(FN-393)	Nutritional properties of several seaweeds species for dairy cattle 98
(FN-327)	Inclusion of various levels of peanut hay (rendeng) in the rabbit diet 101
(FN-328)	The use of corn fodder for rabbit production 104
(FN-359)	Development of beef cattle using agricultural by-product in West Java 107
(FN-361)	Changes in nutrition and fibre silage water hyacinth (Eichornia crassipes) as ruminant feed fermented with several fermentative materials 110

Oral Presentation 1 Focus Session: Feed and Nutrition (2)

(FN-374)	Performance of broiler chickens fed diets supplemented with several palm polysaccharides..... 116
(FN-369)	Supplementation of the diets with rich – selenium feedstuffs on the performance of 4 weeks old broiler chickens 121

(FN-316)	3 Effects of different combination of water hyacinth (Eichornia crassipes mart) leaves and sapu sapu fish (Hypostomus plecostomus) on growth performances of local ducks Lombok	124
(FN-317)	30 Evaluation on the biological effectivity of BS4 enzymes in laying hens diet at commercial farms level	127
(FN-324)	The effect of Type of Microbes and Humic Acid Does to Improve The Quality and Nutriet Contents of Palm Oil Sludge	130
(FN-396)	Effect of probiotic supplementation in feed on meat cholesterol content and intestinal microflora of broiler	131

Oral Presentation 1 Focus Session: Genetic Breeding and Conservation

(GB-106)	3 The qualitative and quantitative characteristics identification of bali cows having different coat color in Kupang, East Nusa Tenggara, Indonesia	136
(GB-107)	11 Mitochondrial d-loop nucleotide sequence of indonesian gayo buffalo: variation and phylogeny studies	141
(GB-109)	Morphology of Indonesian native ducks 1	144
(GB-111)	Variation of Quantitative Traits of Kamang Duck as Local Genetic Resources in Kamang Regency West Sumatera	147
(GB-112)	35 Flock Composition, Effective Population Size, Actual Population Size And Rate of Inbreeding of Kamang Duck in Kamang Magek Regency Agam District	150
(GB-110)	Polimorphism of Silkworms Bombyx mori of two Breeding Centers (Soppeng and Temanggung) in Indonesia	154

Oral Presentation 1 Focus Session: Livestock Production Systems

(LP-232)	Chickens Population and Production and Their Contribution to Human Population in Indonesia	156
(LP-233)	39 pects of broiler Industry in Indonesia	159
(LP-208)	Structural adaptation and concentrating capacity of ruminant kidney: buffalo, cattle and goat	162
(LP-211)	Evaluation of alabio duckdiet (anasplatyrhynchosborneo) on the chemical composition of egg yolks at farms in distric alabio south kalimantan	166
(LP-229)	The effect of duration of photoperiod and light intensity toward first age of laying, feed consumption, daily egg production, and feed conversion	170
(LP-212)	Integrated rice-duck farming system in asia	174

Oral Presentation 1 Focus Session: Socio-Economics and Agribusiness

(SE-718)	An assessment of Indonesia's beef supply chain	178
(SE-701)	Feasibility of sugarcane - cattle integration model in supporting farmer self-sufficiency and prosperity in Kerinci Regency, Province of Jambi, Sumatera	179
(SE-702)	Profile analysis and application of technology in the farmer's group of ettawa crossbred goat in Yogyakarta Indonesia	184
(SE-703)	Profile of farmers' groups and its affectivity in supporting agribusiness on the smallholder beef cattle in Yogyakarta Province, Indonesia	185
(SE-704)	Socioeconomic and productive performance of smallholder dairy farm in Lampang Province, Northern Thailand	186
(SE-729)	Analysis of maize feed industry: a supply chain perspective	190

Oral Presentation 2 Focus Session: Feed and Nutrition (1)

- (FN-367) Production and milk composition of crossbred etawah goats fed on basal diet containing different levels of sesbania (*Sesbania grandiflora*) leaves 192
- (FN-370) The fermentation of bagase with fungi *Ganoderma lucidum* and its ligninolytic enzyme activity 195
- (FN-371) Encapsulated biomineral supplementation in dairy cattle ration on in vitro fermentability and digestibility 198
- (FN-372) Effect of packaging medium on survival of napier grass stem cutting 202
- (LP-215) Effects of Rumen Mechanical Stimulating Brush Administration on eating behavior, dry matter intake and dry matter digestibility of Brahman Cross Steers Fed with Low Forage Diet 205

Oral Presentation 2 Focus Session: Feed and Nutrition (2)

- (FN-373) Effect of *Piper retrofractum* as a phytogetic feed additive for broiler performance 207
- (FN-375) Production performance and egg quality of laying hens on silage juice 210
- (FN-376) Digestibility evaluation of microparticle protein derived from fish meal and soybean meal in broiler chicken 214
- (FN-377) Piper betle Leaf Infuse Supplementation as Herbal Antibiotic to Reduce *Salmonella* sp. in Small Intestine of Quail (*Cortunix cortunix japonica*) 217
- (FN-381) Effect of addition mannase enzyme in diet on broiler production performances 220
- (FN-344) Broiler chickens performance as affected by animal fat and plant oil under hot arid conditions of Sudan 223

Oral Presentation 2 Focus Session: Socio-Economics and Agribusiness

- (SE-707) Development of livestock agroindustry: increasing revenue economic and employment opportunities to local society 228
- (SE-714) Urban community program of rabbit raising based on eco-friendly 231
- (SE-709) Farmers' adoption to pig intensive keeping system in Taebenu Sub District, West Timor, Indonesia 232
- (SE-720) The empowerment of Rabbit Breeders in Lang-lang Village, Singosari Districts, Malang City, East Java Province, Indonesia 233
- (SE-713) Evaluation of productivity indicators to propose broiler performance index for assessment of broiler operations 234
- (SE-727) Fresh Milk Quality and Information Availability on Local Stage in Malang Area East Java, Indonesia 238

Oral Presentation 2 Focus Session: Reproduction

- (RP-401) Sperm quality of ongole crossbred cattle on egg yolk cauda epididymal extender during cooling process in straw 242
- (RP-405) Semen characteristics and sperm recovery rate of Aceh bull frozen semen friendly 245
- (RP-414) Post-thawed semen quality of West Java local ram at different level of gliserol 248
- (RP-417) Effect equilibration time in the process of freezing the quality of semen Wagyu bull using diluent (R) Andromed 252
- (RP-423) The Effect of Mangosteen (*Garcinia mangostana*) Peel Filtrate Supplementation in Skim Milk based Diluent on Limousin Culled Semen Quality during Cooling Process... 255
- (RP-406) The acceptability of limousine bull raw semen for frozen semen production 258

Oral Presentation 2 Focus Session: Processing Product

(PP-601)	Meta-analysis of nutritional quality comparison between organic and conventional dairy products	263
(PP-603)	Physical characteristics and mineral composition of bone meals produced from different body parts of cattle bones by open-air burning and limed-water cooking and limed-water cooking	266
(PP-604)	Effect of storage time and citric acid addition on functional properties of arabian chicken egg white	269
(PP-607)	The Physical quality and organoleptic properties of beef meatballs in Malang, East Java, Indonesia	278
(PP-608)	Application of porang flour for fat replacer in reduced fat mayonnaise	721
(PP-609)	Effect of canna starch (<i>Canna edulis</i> Ker) during refrigerator storage on syneresis, viscosity, and total plate count of yoghurt drink	282

Oral Presentation 03: Focus Session: Feed and Nutrition (1)

(FN-302)	Biological status and conservation of anoa (<i>Bubalus depressicornis</i>) in tropical forest of North Sulawesi	284
(FN-349)	The nutritional value evaluation of ammoniated rice straw and fermented sago dregs in complete feed on performances of ongole cross breed cattle	287
(FN-389)	Potential Source of Feedstuffs From Oil Palm Plantation Areas For Development of Cattle Production in Indonesia	288
(FN-395)	Methane reduction strategy with fat supplementation for development of sustainable ruminant livestock production	291
(FN-397)	Study of the effect of fortification of herbals to multinutrient feed block on rumen fermentation and total gas production in vitro.....	295
(FN-398)	Evaluation of Edamame Husk Silage Using In Vitro Gas Production Method	296
(FN-359)	Development of beef cattle using agricultural by-product in West Java	297
(RP-407)	Nutritional responses on the hypothalamic-pituitary-ovarian axis on female goats.....	300

Oral Presentation 3 Focus Session: Feed and Nutrition (2)

(FN-301)	Performance and egg quality of quail fed marigold flower extract and conservation of anoa (<i>Bubalus depressicornis</i>) in tropical forest of North Sulawesi	304
(FN-353)	Performance of broiler fed diets containing lipid from mealworm (<i>Tenebrio molitor</i> L.)	307
(FN-378)	Propionic acid and enzymes for rabbit feed	310
(FN-379)	Enzyme activities and retention of Ca and P of the small intestinal digesta of broilers fed Papua Foxtail Millet containing feed	313
(FN-384)	Evaluation of Alabio duck diet (<i>Anas platyrhynchos borneo</i>) on the chemical composition of egg yolk at farms in District Alabio South Kalimantan	317
(FN-385)	Enrichment of Feedstuff With Fermented Soybean Peel to Increase Rabbit Body Weight	322
(FN-386)	Correlation of NDF (Neutral Detergent Fiber) With In Vitro Gas Production on various legumes	328
(FN-387)	Effectiveness of Feeding Fermented Noni Leaf Meal on Body Resistance, Protein Utilization Efficiency and Performance of Crossbred Kampung Chickens	332

Oral Presentation 3 Focus Session: Genetic Breeding and Conservation

(GB-117)	Measurement of reactive oxygen species (ROS) in high and low residual feed intake cattle	336
(GB-102)	Prediction of meat quality in Bali cattle using ultrasound imaging	339
(GB-113)	Diversity Of Insulin Growth Factor-1 (Igf-1) Gene Of Kacang Goat In Kota Gorontalo And Regency Of Bone Bolango Province of Gorontalo	342
(GB-105)	Identification of single nucleotide polymorphism of melanocortin 4 receptor gene in Bligon goat	346
(GB-109)	Association of leptin genes polymorphism with average daily gain of local cattle at Sumis West Java	349
(GB-103)	Single nucleotide polymorphism (SNP) using growth hormone (GH) gene of results reciprocal crosses teal with Magelang duck	352
(GB-116)	Color variation of Indonesian native ducks	355
(GB-114)	Polymorphism of Growth Hormone Gene in Selecting Etawah Crossbred (PE) Goats	359
(GB-115)	Estimation of Heritability and Breeding Value for Birth Weight in Bali Cattle	360
(RP-416)	Quality of semen and production frozen semen of different breed and individual beef cattle	361

Oral Presentation 3 Focus Session: Livestock Production

(LP-234)	Physical Carcass Characteristics From Body Composition of Timor Pigs Boar Kept Extensively in the Province of East Nusa Tenggara – Indonesia	366
(RP-417)	Effect equilibration time in the process of freezing the quality of semen Wagyu bull using diluent (R) Andromed	369
(LP-235)	The effect of cherry leaf (<i>Muntingia calabura</i>) extract on hatchability and embryo mortality hybrid duck egg	372
(LP-236)	Preliminary study on estimation of energy requirement for eating through urinary Creatinine in local male sheep	375
(LP-201)	Correlation between crude protein levels in the diets and carcass weight and carcass percentage in thin tailed lambs	376
(LP-202)	Correlation between yield grade and rib eye muscle area with different feed level protein of male thin-tailed weaning lamb	379
(LP-203)	Correlation between fecal rough particle and feed digestibility on thin tail lambs	380
(LP-206)	Phenotypic characteristics of Aceh cattle on different sex and age in smallholder farmers	381

Oral Presentation 3 Focus Session : Veterinary and Health Care

(VT-801)	Jeringau (<i>Acorus Calamus L</i>) As antibiotic substitute on salmonella typhimurium infected broiler performances	385
(VT-803)	Prevalence of trematodes infection in sacrificial cattle in some mosques Manokwari Regency West Papua Province Indonesia	386
(VT-806)	Identification of swine disease, prevention and treatment (a case study in Masungkulan village Bitung city)	390
(VT-807)	Residues of aflatoxins in liver, meat, and egg of Alabio duck collected from South Kalimantan, Indonesia	393
(VT-809)	Extraction of bioactive components of cocoa leaves by product and their activation as antioxidants and antimicrobials	397
(VT-810)	In vitro antibacterial activity of Black soldier fly (<i>Hermetia illucens</i>) larvae extracts against gram-negative bacteria	402

(VT-811)	Isolation and Characterization of Oviduct Specific Glycoprotein At Goats Oviductal fluid As Candidate Isolate Supplementation of Goats Frozen Semen.....	405
(VT-812)	Antibacterial activity of <i>Muntingia Calabura</i> Lam. against some selected bacteria	
	33 <i>ises mastistis</i>	406
(VT-805)	GST fusion assisted overexpression and purification of recombinant parasite lactate dehydrogenase enzyme in <i>Escherichia coli</i>	407

Oral Presentation 4 Focus Session: Feed and Nutrition (1)

(FN-303)	Profile of corn silage juice in different ages and its shelf life	409
(FN-307)	Effect of formic acid on intestinal truly absorbed protein of alfalfa silage	410
(FN-309)	1 <i>in vitro</i> dry matter degradation kinetics of ruminant feed ¹	411
(FN-310)	The effects of phenolic compounds in brown propolis extracts on rumen methane production (<i>in vitro</i>)	415
(FN-311)	Effect of corn grain physical processing on <i>in vitro</i> rumen microbial protein production and gas production parameters	419
(FN-312)	Effect of peppermint essential oil versus a mixture of formic and propionic acids on corn silage VFA score	420
(FN-313)	Forage production and nutritive value of <i>Clitoria ternatea</i> grown under different maize plant density	423
(FN-314)	Prediction of feed metabolizable energy and metabolizable protein contents from.....	426

Oral Presentation 4 Focus Session : Feed and Nutrition (2)

(FN-320)	Nutritional responses on the hypothalamic-pituitary-ovarian axis on female goats.....	430
(FN-321)	Effects of long transportation preceded by short periods of deprivation on the intake	
	34 <i>nutrient digestibility of Bos sondaicus</i> bulls	433
(FN-365)	Addition of different species of forages legumes on physical, chemical characteristics	
	27 <i>in vitro</i> digestibility of dairy cattle feed pellet.....	436
(FN-322)	Supplementing <i>Saccharomyces cerevisiae</i> into low quality local-based feeds improves performance and nutrient digestibility of starter local pigs	439
(FN-323)	Effects of poultry by product meal based diet on performances of weaning and growing pigs	442
(FN-343)	Growth performance and carcass composition of lambs consumed complete feed with increasing poly unsaturated fatty acids of sunflower oil	446
(FN-345)	Blood properties of broiler feed ration containing different Level of pearl grass (<i>Hedyotis corymbosa</i> (L) Lamk)	447
(FN-351)	Effect supplementation of multi-nutrient feed supplement or urea multi-nutrient molasses block in diet of dairy cattle.....	451

Oral Presentation 4 Focus Session: Reproduction

(RP-404)	Cleavage rate of sheep oocytes <i>in vitro</i> fertilized by post-thawed epididymal spermatozoa after storage of epididymis at 4° c	456
(RP-420)	Effect of Carnitine on Quality of Post 1 <i>awed Goat Sperm</i>	459
(RP-408)	Hormone progesteron concentration at the time of Artificial Insemination (AI) on	
	4 <i>nception rate of beef cows</i> in rural farm in West Sumatera.....	462
(RP-411)	Different ratio of omega-3 and omega-6 in total mix ration on blood metabolites, characteristic of estrous and pregnancy rate of ewes.....	463
(RP-412)	The comparison of estrus between natural and synchronized PGF2 α based on clinical sign and vaginal cytology in Ettawa grade	467

(RP-413)	The oocyte and sperms cryopreservation of local sheep and goat for gene bank in native Indonesian animal	471
(RP-418)	Motility spermatozoa of bali cattle after given crude tannin supplement	472
(RP-421)	Reproductive performance of female PO and PO x Limousin crossbred cattle in Kepanjen District of Malang Regency	476
(RP-422)	Estrus emerging following laser puncture induction in goats	477

Oral Presentation 4 Focus Session: Livestock Production System

(LP-204)	Correlations between crude protein / total digestible nutrients ratio with commercial cuts weight and percentage of thin tailed lambs	479
(LP-205)	Eating time and ruminating in lambs fed at different total digestible nutrients content of feed	483
(LP-223)	Growth performance of pelung sentul kampung meat type chicken crossing on age 0-10 weeks	484
(LP-230)	Physiological Responses and Milk Qualities of Holstein Friesian During Dry Season at High Altitude	488
(LP-215)	Effects of rumen mechanical stimulating brush administration on eating behavior and dry matter digestibility of brahman cross steers fed with low forage diet	491
(LP-217)	The study on the use of rough fecal particle proportion to estimate feed digestibility on post-weaned lambs	492

Oral Presentation 4 Focus Session : Socio-Economic and Agribusiness

(SE-717)	Business characteristic of salted egg in the agro industrial center, Brebes, Central Java..	496
(SE-726)	Application of science and technology through making compost fertilizer for group members of pig farming	499
(SE-716)	Impact on capital assistance group revenues pig farm "Maesaan" Pinasungkulan Bitung City	502
(SE-719)	Empowerment for farmers group of cattle farming in the Tonsewer Village	505
(SE-712)	Productivity of pigs and contribution of pig farming on household income in Pinasungkulan Village Bitung City	508
(SE-721)	Introduction of feed technology for development of cattle in North Bolaang Mongondow	511
(SE-722)	Fresh beef demand elasticity among households in Malang city	514
(SE-708)	Analysis of the self ability level of farmers on the integration system of cattle and oil palm plantations in Jambi Province	518

Oral Presentation 5 Focus Session : Feed and Nutrition

(FN-305)	Feed consumption and dry matter digestibility of feed containing different protein levels in thin tailed lambs fattened after weaning	520
(FN-390)	Effect of storage time and physical form of diet with formulated from local feed based nutrient composition of the diets	524
(GB-101)	A pathway to sustainable agriculture through protection and propagation of indigenous livestock breeds of pakistan-cholistani cattle as a case study through protection and propagation of indigenous livestock breeds of pakistan-cholistani cattle as a case study.	527
(FN-388)	Effect of encapsulant materials in encapsulation process of leaf green grass jelly extract (Cyclea barbata L. Miers) on product microcapsule quality	528
(FN-394)	Nutritive value of various legume tree as protein sources in animal nutrition	529

(FN-390)	Effect of storage time and physical form of diet with formulated from local feed based on nutrient composition of the diets	530
(FN-385)	Enrichment of Feedstuff With Fermented Soybean Peel to Increase Rabbit Body Weight	533
(FN-344)	Broiler chickens performance as affected by animal fat and plant oil under hot arid conditions of Sudan	539
(FN-391)	Calcium and phosphorous absorption of field grass during the dry season at medium altitude in Garut	543
(FN-347)	Isolation and screening of lactic acid bacteria from dadih for glutamic acid production as precursor of γ -Amino Butyric Acid (GABA) induced heat stress in broiler	546
(FN-357)	The effect of fertilizers on soil characteristics of sand-mining land and nutrients content of sorghum patir 3.7 (<i>Sorghum bicolor</i> (L) Moench)	550
(FN-365)	Arbuscular mycorrhizal fungi and rock phosphate role on plant growth of sorghum (<i>Sorghum bicolor</i> L.) as a forage	553
(FN-364)	The Potential of Local Feed Sources for Silage Production in Supporting The Cattle Raising Business in East Ranotongkor Village	556

7 Oral Presentation 5 Focus Session: Feed and Nutrition (2)

(FN-352)	Legumes wafer for improvement the post-weaning etawah crossbreed goats performance	560
(FN-332)	Utilization of cricket meal in creep feed diet of growing etawah cross breed goats	563
(FN-360)	Performance of first cutting of Pennisetum purpureun cv.Mott under different level of Nit and nitrogen fertilizer	567
(FN-325)	Amino acid characterization of tofu waste fermentation using effective microorganism-4 and <i>Lactobacillus plantarum</i> culture	570
(FN-331)	In vitro digestibility profiles of cricket meal as protein source in the ration	573
(FN-333)	Production of roughage feed under different drying methods and evaluation of the feeding value	576
(FN-335)	In vitro nutrient digestibility of <i>Chromolaena odorata</i> -based silage treated with <i>Corypha gebanga</i> meal and rumen content	579
(FN-336)	Production, characterization and purification of xylanase from <i>Staphylococcus aureus</i> BXi-K4	583
(FN-340)	Estimate intestinal truly absorbed protein of alfalfa hay and alfalfa silage using new batch system (DVE/OEB)	587
(FN-342)	Chitosan protection to saga leaves extract (<i>Abrus precatorius</i> Linn) and Lingzhi mushroom (<i>Ganoderma lucidum</i>) from rumen microbial degradation	588
(FN-348)	Effects of different types of cakes in rations on the performance of culled Cyprus shami does in Half Elgageda, Kassala State, Sudan	592
(FN-361)	Changes in nutrition and fibre silage water hyacinth (<i>Eichomia crassipes</i>) as ruminant feed fermented with several fermentative materials	598
(FN-400)	Effect of <i>Phanerochaete chrysosporium</i> to enzymatic activity and lignin on fermentation process of cocoa pod (<i>Theobroma cacao</i>)	603

28 Oral Presentation 5 Focus Session : Feed and Nutrition (3)

(FN-329)	Effect of fish oil and its combination with tomato powder supplementation on laying performance of native chicken	610
(FN-354)	Effect of substitution of meat bone meal with protein concentrate of mealworm (<i>Tenebrio molitor</i> L) on performance of broilers	611

(FN-356)	Supplementation of Zn and vitamin E on the immune responses and performance of broilers in a tropical environment.....	614
(FN-358)	Supplementation of zinc and vitamin E in the diet on performance and expression of HSP70 gene of broiler in tropical environment.....	618
(FN-362)	In Supplementation of phitase and mananase in diet which high fiber and phitat acid on quality of quail eggs Coturnix – coturnik japonica	621
(FN-366)	Production performances of broiler chicken fed on diets containing different levels of crab (Portunuspelagicus) by- product meal	625
(FN-368)	Serum lipid profile and egg quality of layer fed boiled tomato waste.....	628
(FN-315)	Optimalisation usage of feed additives on low protein diet for broiler raised in the tropical region.....	631

Oral Presentation 5 Focus Session: Livestock Production System

(LP-218)	Estimating yield grade by using body measurements and body condition score in thin-tailed sheep	635
(LP-219)	Exploration of fecal physical test to estimate weaning age of kids	639
(LP-237)	Lactation Curve Pattern and Milk Production Performance of Crossbred Friesian Holstein in Pasuruan Regency, Indonesia	643
(LP-226)	Correlation of Protein Level in the Diets on Yield Grade and Rib Eye Muscle Area of Post-Weaning Lamb	644
(LP-227)	Effects of different combination of water hyacinth leaves and sapu sapu fish on growth performances of local ducks in lombok.....	648
(LP-228)	Identification of Sonok cattle characteristics as local genetic resources in Madura island	651
(LP-230)	Physiological Responses and Milk Qualities of Holstein Friesian During Dry Season at High Altitude	657
(LP-224)	Correlation between body weight, body condition score and vital statistics of madura cattle in pamekasan, madura.....	660
(LP-214)	Growth and development of senduro goat in senduro lumajang district	670
(LP-210)	Senduro goats doe productivity index in senduro subdistrict lumajang regency	671
(LP-209)	Effects of probiotics supplementation on milk quality of etawa crossbred dairy goat fed by product of palm oil industry	672
(LP-213)	Milk production of holstein friesian cows related to heat stress in responding to climate change.....	681
(LP-241)	The Effect of Water Clover Leaf Juice (Marsilea crenata) Against Blood Calcium Levels And Histology Os humerus On Rat (Rattus novergicus)	684

Oral Presentation 5 Focus Session : Socio-Economics & Others

(SE-724)	Financial analysis of the pig farming that utilizing waste disposal system as environmentally friendly farming practices (A case on a pig breeding farm in Tomohon, North Sulawesi)	690
(SE-723)	Farmers group’s role in farming management and rabbit farmers’ communication in Lang – Lang Village, Singosari District, Malang Regency, Indonesia	693
(SE-728)	The Development Program “Village Poultry Farming” to local hens Farmers of Tenga Village cation of Sonok cattle characteristics as local genetic resources in Madura island	699
(EV-504)	Utilization of pig waste to biogas in Kotamobagu City	703
(EV-501)	Spatial distribution model of dairy cattle productivity in West Java.....	708

(EV-502) Methane emission from beef cattle production at low- and high-altitude of East Nusa Tenggara, Indonesia	709
(LP-216) The effect of parity, month of lactation and incidence of subclinical mastitis on milk yield.....	712
(LP-238) Production and Carcass Performance of Male Local Mojosari Ducks Given the Traditional Medicine Herbs on Drinking Water.....	713
(LP-242) Effect of Closed House Temperature on feed intake, weight gain and Triiodothyronine (T3) and Thyroxine Hormone (T4) levels of Broiler Chickens.....	714
(LP-240) Production and Nutrition Composition of Pollen from Foraging Honey Bees (<i>Apis mellifera L.</i>) in The Red Caliandra (<i>Calliandra calothyrsus</i>) Plantation Area	715

Estimating Yield Grade by Using Body Measurements and Body Condition Score in Thin-Tailed Sheep

Ulia Renfelia Baysi, Agung Purnomoadi and Endang Purbowati

18

Faculty of Animal and Agricultural Science, Diponegoro University, Semarang, Indonesia
Corresponding author: agung194@yahoo.com

Abstract

This research was aimed to determine the relationship between body measurements (chest girth, body length, height of shoulder) and body condition score (BCS) with yield grade on 73 Thin-tailed sheep aged about 0-2 years. The results revealed a moderate correlation between chest girth ($y = 0.0028x + 0.2997$; $r = 0.5041$), body length ($y = 0.0027x + 0.3326$; $r = 0.4693$) and height of shoulder ($y = 0.0028x + 0.3120$; $r = 0.4219$) with yield grade. The relationship between BCS with yield grade also resulted moderate correlation coefficient ($y = 0.0597x + 0.3204$; $r = 0.4123$). Estimating yield grade by using body measurements and BCS could therefore be a tool for production improvement without slaughter the sheep. Chest girth measurements would be the best to estimate yield grade value in Thin-tailed sheep.

Keywords: body measurements, body condition score, yield grade, Thin-tailed sheep

Introduction

Thin-tailed sheep are a local sheep that used as an important part of farming, especially by a traditional farmer because of low-cost maintenance and prolific characteristic. The farmer and livestock market usually determine live weight on management or marketing system. Properly measure of the trait is often difficult because of unavailability of weighing scale (Bello and Adama, 2012). In addition, body measurements could be used to predict live weight fairly well in the situation where weighing scale is not available (Afolayan *et al.*, 2006).

Carcass weight has positive correlation with live weight and could be estimated by carcass percentage. Male Thin-tailed sheep fed by soybean curd waste had carcass percentage about 43.85-49.81% of live weight (Rianto *et al.*, 2014). Higher live and carcass weights, higher yield grade value (Adeyinka and Mohammed, 2006). Yield grades reflect the quantity of retail cuts that can be expected from a carcass. Lower yield grade value, higher the amount of retail cuts from the leg, loin, rib and shoulder (Burson and Donae, 1983). The yield grade is important to producers because it can affect animal value and the overall economic returns from the animal (Holland and Loveday, 2013). Yield grade could be calculated by measuring fat thickness between the 12th and 13th ribs over both ribeyes at the midpoint of the ribeye (Burson and Donae, 1983). But, this estimation of yield grade needs some stages of calculation and only can be applied in dead sheep. Alternatively, body measurements could be used to reach carcass quality target without slaughter the sheep.

Body measurements and body weight for a ewe from a large breed may be identified to that of a ewe from a small breed, but the level of body fatness will be very different. So, body condition score (BCS) is a useful tool of comparing one sheep to another (Fernandez, 2012) based on a simple indicator closely associated with the body composition (Nsoso, 2003).

Therefore, the objective of the present study was to determine the relationship between body measurements (chest girth, body length, shoulder height) and body condition score with yield grade in Thin-tailed sheep.

Methodology

The data for this study were obtained from 73 female Thin-tailed sheep aged about 0-2 years in Bustaman slaughterhouse, Semarang, Indonesia. Instruments used in this study were a metric tape rule, measuring stick, labeled tie and a caliper.

Sample data were collected by incidental sampling, where all of female Thin-tailed sheep recorded as the data. Labeled tie was set on right back leg of the sheep for identification. Chest girth was measured by wrapping metric tape rule in the back of the scapula. Body length was measured by placing measuring stick start from tuber iⁱⁱ until tuberos humeri. Height of shoulder was measured by placing a measuring stick at the top of the shoulder straight to the ground. Body condition score (BCS) was determined by feeling the muscle and fat along the back between the last rib and the front of the hip bones (Fernandez, 2012). BCS was rated in 5-point scale (ranging from 1 for skinny to 5 for fatty, representing emaciated, poor, acceptable, fat or obese animals, respectively) (Yakubu *et al.*, 2013). Measured fat thickness by using a caliper between the 12th and 13th ribs. Yield grade was calculated by using the formula (Burson and Donae, 1983): $0.4 + (10 \times \text{adjusted fat thickness in inch})$. The data were analyzed by correlating body measurements (chest girth, body length, height of shoulder) and BCS with yield grade. The formula was equated as $Y = ax + b$, where every increment of x will increase Y as much as a . Based on Sugiyono (2014) interpretation correlation coefficient are very low (0.000-0.199); low (0.200-0.399); moderate (0.400-0.599); strong (0.600-0.799) and very strong (0.800-1.000).

Results and Discussions

The data distribution of chest girth, body length, height of shoulder, BCS and yield grade from 73 female Thin-tailed sheep are summarized in Table 1.

Table 1. Data Distribution of Chest Girth, Body Length, Height of shoulder, BCS and Yield Grade of Thin-tailed Sheep

Parameter	Range	Mean	Standard Deviation	CV (%)
N	73			
Chest girth (cm)	43.00-72.00	56.05	5.99	10.69
Body length (cm)	33.00-62.00	45.67	5.74	12.57
Height of shoulder (cm)	42.00-68.00	51.99	5.04	9.69
BCS	1.70-3.10	2.30	0.23	10.00
Yield grade	0.44-0.56	0.46	0.03	6.52

The data above show that body length had the highest coefficient varian (12.57), followed by chest girth (10.69), BCS (10.00), height of shoulder (9.69) and yield grade (6.52). All the coefficient varian were less than 15%, so the animals used in this study were similar.

Correlation between body measurements and yield grade

Correlation between body measurements (chest girth, body length, height of shoulder) and yield grade is shown in Figure 1. Chest girth had the highest correlation coefficient ($r = 0.5041$; $y = 0.0028x + 0.2997$; $R^2 = 0.2541$), followed by body length ($r = 0.4693$; $y = 0.0027x + 0.3326$; $R^2 = 0.2203$) and height of shoulder ($r = 0.4219$; $y = 0.0028x + 0.312$; $R^2 = 0.1780$).

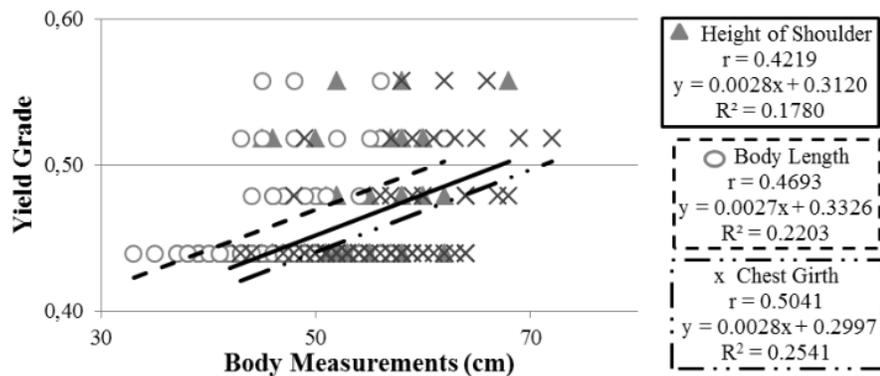


Figure 1. Correlation Between Body Measurements (cm) and Yield Grade

Increment of body measurements will increase live weight, carcass weight and fat thickness that could represent yield grade value. High feed consumption causes higher live weight and bigger fat deposition (Purbowati *et al.*, 2007). When the nutrition are fulfilled, excess protein and energy would be deposited as fat. High concentrate feeding would lead fat deposition especially subcutan fat. Long time fattening also give real impact to the fat thickness because of accumulation of fat deposition would increase time by time (Khasrad *et al.*, 2005).

Chest girth and yield grade became the best correlation because chest girth could figure sheep's body volume. Chest girth as the best predictor in small ruminant also been reported by Bello and Adama (2012) in Savanah Brown goats; Adeyinka and Mohammed (2006) in Nigerian red Sokoto goats.

Correlation between BCS and yield grade

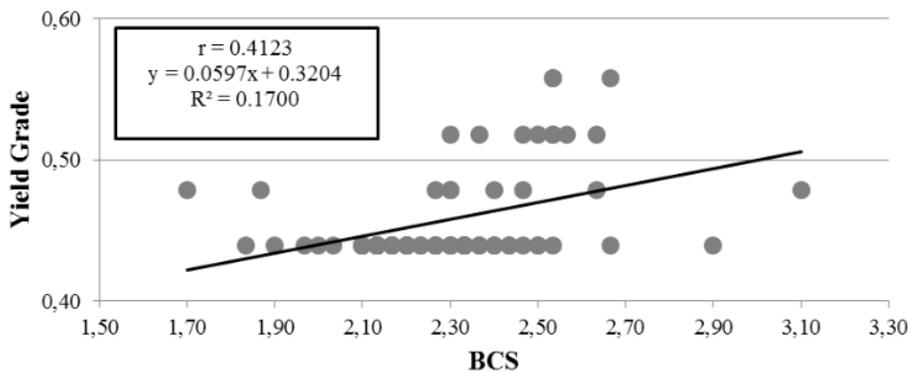


Figure 2. Correlation Between BCS and Yield Grade

Figure 2 shows correlation between BCS and yield grade ($r = 0.4123; y = 0.0597x + 0.3204; R^2 = 0.1700$). BCS could be used to estimate yield grade because it had moderate coefficient correlation. BCS is a potential tool to increase production efficiency and more accurate than a simple eye appraisal. BCS is based on feeling the level of muscling and fat deposition over and around the vertebrae in the loin region. (Thompson and Meyer, 1994).

BCS is correlated with the proportion of ³⁷ or a direct measurement of backfat depth. It is providing a better estimation result rather than body weight alone (Yakubu *et al.*, 2013).

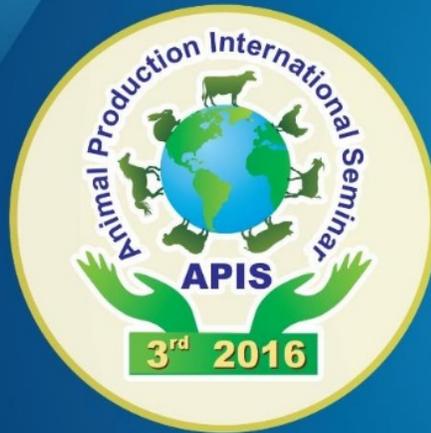
Conclusion⁴²

According to the results of this study, there were moderate correlation between body ⁵² measurements and body condition score with yield grade. Therefore, it was concluded that the estimation of yield grade from body measurements and BCS could be a tool for production improvement without slaughter the sheep. Chest girth measurements would be the best to estimate yield grade value in Thin-tailed sheep.

Reference

- Adeyinka, I. A. and I. D. Mohammed. 2006. Accuracy of body weight prediction in Nigerian Red Sokoto goats raised in North Eastern Nigeria using linear body measurement. *Pakistan J. of Bio. Sci.* 9 (15): 2828-2830.
- Afolayan, R. A., I. A. Adeyinka and C. A. M. Lakpini. 2006. The estimation of live weight from body measurements in Yankasa sheep. *Czech J. Anim. Sci.* 51 (8):343-348.
- Bello, A. A. and T. Z. Adama. 2012. Studies on body weight and linear body measurements of castrates and non-castrate Savannah Brown goats. *Asian J. of Anim. Sci.* 6 (3):140-146.
- Burson, D. E. dan T. Donae. 1983. G83-675 Yield Grades and Quality Grades for Lamb Carcasses. University of Nebraska, Lincoln. pp. 1336.
- Fernandez, D. 2012. Body Condition Scoring of Sheep. University of Arkansas, Chicago.
- Holland, R. and D. Loveday. 2013. Understanding Yield Grades and Quality Grades for Added Beef Producers and Marketers. UT Extension SP 755, Institute of Agriculture of the University of Tennessee. pp. 2
- Khasrad, R., Saladin, Arnimdan N. Jamarun. 2005. The effect of feeding level and fattening period on the carcass characteristic of the Pesisir cattle. *J.P. P.Tropis* .30(4): 13-16.
- Nsoso, S. J., A. A. Aganga, B. P. Moganetsi and S. O. Tshwenyane. 2003. Body weight, body condition score and heart girth in indigenous Tswana goats during the dry and wet seasons in Southeast Botswana. *Livestock Research for Rural Dev.* 15 (2).
- Purbowati, E., R. Adiwanti dan M. Nikmah. 2007. Yield grade domba lokal jantan yang digemukan secara feedlot dengan kadar protein dan energi pakan komplit serta bobot potong yang berbeda. *Lokakarya Nasional Domba dan Kambing*. pp. 167-172
- Rianto, E., M. Budiharto dan M. Arifin. 2004. Proportion of muscle, bone and fat of carcass of male Thin Tail sheep fed tofu by-product. *Seminar Nasional Teknologi Peternakan dan Veteriner*. pp. 309-313.
- Sugiyono. 2014. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Alfabeta, Bandung.
- Thompson, J. Dan H. Meyer. 1994. *Body Condition Scoring of Sheep*. OSU Extension Catalog Oregon State University, Corvallis.
- Yakubu, A., O. F. Fakuade, E. A. Fait, L. S. Musa-Azaradan O. A. Ogunwole. 2013. Determination of prediction equations to estimate body condition score from body size and testicular traits of Yankasa rams. *J. Indonesian Trop. Anim. Agric.* 38(2): 79-85.

THE 3RD ANIMAL PRODUCTION INTERNATIONAL SEMINAR
THE 3RD ASEAN REGIONAL CONFERENCE ON ANIMAL PRODUCTION
19-21 OCTOBER 2016
MALANG, EAST JAVA, INDONESIA



ISBN : 978-602-432-017-1

Co-organized by :



Estimating Yield Grade by Using Body Measurements and Body Condition Score in Thin-Tailed Sheep

ORIGINALITY REPORT

14%

SIMILARITY INDEX

13%

INTERNET SOURCES

4%

PUBLICATIONS

%

STUDENT PAPERS

PRIMARY SOURCES

1	profdoc.um.ac.ir Internet Source	1%
2	scialert.net Internet Source	1%
3	sinta3.ristekdikti.go.id Internet Source	1%
4	doaj.org Internet Source	1%
5	nsprawitoschool.files.wordpress.com Internet Source	1%
6	digitalcommons.unl.edu Internet Source	1%
7	repository.ipb.ac.id Internet Source	<1%
8	fapet.ugm.ac.id Internet Source	<1%
9	publications.waset.org	

Internet Source

<1%

10

www.semanticscholar.org

Internet Source

<1%

11

fsd.unsyiah.ac.id

Internet Source

<1%

12

permana.staff.ipb.ac.id

Internet Source

<1%

13

Afolayan RA, Adeyinka IA, Lakpini CAM. "The estimation of live weight from body measurements in Yankasa sheep", Czech Journal of Animal Science, 2011

Publication

<1%

14

biologi.fmipa.unand.ac.id

Internet Source

<1%

15

repository.ugm.ac.id

Internet Source

<1%

16

stay-control.xyz

Internet Source

<1%

17

Muhammad Said, Herni Ali. "An analysis on the factors affecting profitability level of Sharia banking in Indonesia", Banks and Bank Systems, 2017

Publication

<1%

K F Setyawan, F R Paulina, S Sutaryo, W S

18 Dilaga, V Restitrisnani, A Purnomoadi. "The study of creatinine as an indicator of body protein in small ruminant", IOP Conference Series: Earth and Environmental Science, 2019
Publication <1%

19 ejournal.unib.ac.id
Internet Source <1%

20 repository.ung.ac.id
Internet Source <1%

21 www.3rdicsae.org
Internet Source <1%

22 www.livecorp.com.au
Internet Source <1%

23 forages.tennessee.edu
Internet Source <1%

24 www.scielo.cl
Internet Source <1%

25 Ari Prima, Endang Purbowati, Edy Rianto, Agung Purnomoadi. "The effect of dietary protein levels on body weight gain, carcass production, nitrogen emission, and efficiency of productions related to emissions in thin-tailed lambs", Veterinary World, 2019
Publication <1%

26 id.123dok.com
Internet Source <1%

27	sinta2.ristekdikti.go.id Internet Source	<1%
28	knepublishing.com Internet Source	<1%
29	m.scirp.org Internet Source	<1%
30	medpub.litbang.pertanian.go.id Internet Source	<1%
31	zombiedoc.com Internet Source	<1%
32	Georges Abboud, Mona(Peters, Kurt J. and Zessin, Karl). "Effect of different body condition score on the reproductive performance of Awassi sheep", Landwirtschaftlich-Gärtnerische Fakultät, 2009. Publication	<1%
33	eprints.unram.ac.id Internet Source	<1%
34	repository.unitri.ac.id Internet Source	<1%
35	worldwidescience.org Internet Source	<1%
36	www.scribd.com Internet Source	<1%

- 37 Murat Yilmaz, Tufan Altin, Orhan Karaca, Ibrahim Cemal, Husnu Erbay Bardakcioglu, Onur Yilmaz, Turgay Taskin. "Effect of body condition score at mating on the reproductive performance of Kivircik sheep under an extensive production system", Tropical Animal Health and Production, 2011
Publication <1%
-
- 38 docobook.com
Internet Source <1%
-
- 39 repository.unhas.ac.id
Internet Source <1%
-
- 40 www.coursehero.com
Internet Source <1%
-
- 41 www.lrrd.org
Internet Source <1%
-
- 42 www.isisn.org
Internet Source <1%
-
- 43 B. Amare, A. Kefyalew, M. Zeleke. "Typical features, characterization and breeding objectives of Begait sheep in Ethiopia", Animal Genetic Resources/Ressources génétiques animales/Recursos genéticos animales, 2012
Publication <1%
-
- 44 Syahrir Syahrir, Hartutik Hartutik, Kusmartono Kusmartono, Damry Damry. "Nutritional <1%

Qualities of Cocoa Pod Husk Treated with Bioconversion and or Provision of Nitrogen Sources in the Rumen", Media Peternakan, 2017

Publication

45 www.frontiersin.org <1 %
Internet Source

46 M.A. Cam, M. Olfaz, E. Soydan. "Body Measurements Reflect Body Weights and Carcass Yields in Karayaka Sheep", Asian Journal of Animal and Veterinary Advances, 2010 <1 %
Publication

47 S D Shackelford, T L Wheeler, M Koochmaraie. "Coupling of image analysis and tenderness classification to simultaneously evaluate carcass cutability, longissimus area, subprimal cut weights, and tenderness of beef.", Journal of Animal Science, 1998 <1 %
Publication

48 cgspace.cgiar.org <1 %
Internet Source

49 krishikosh.egranth.ac.in <1 %
Internet Source

50 repository.ub.ac.id <1 %
Internet Source

51

researchspace.ukzn.ac.za

Internet Source

<1%

52

Sèyi Fridaius Ulrich Vanvanhossou, Rodrigue Vivien Cao Diogo, Luc Hippolyte Dossa.

"Estimation of live bodyweight from linear body measurements and body condition score in the West African Savannah Shorthorn Cattle in North-West Benin", Cogent Food & Agriculture, 2018

Publication

<1%

53

www.slideshare.net

Internet Source

<1%

Exclude quotes On

Exclude matches Off

Exclude bibliography On