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AND TROPICAL ANIMAL INDUSTRY"

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# LIST OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE</td>
<td>iii</td>
</tr>
<tr>
<td>REPORT FROM ORGANIZING COMMITTEE</td>
<td>iv</td>
</tr>
<tr>
<td>WELCOME ADDRESS</td>
<td>v</td>
</tr>
<tr>
<td>OPENING REMARKS</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF CONTENTS</td>
<td>vii</td>
</tr>
<tr>
<td><strong>PART I</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PLENARY SESSION</strong></td>
<td></td>
</tr>
<tr>
<td>1. Asian livestock: Opportunities, challenges and the response</td>
<td>1–5</td>
</tr>
<tr>
<td>Vinoj Ahuja</td>
<td></td>
</tr>
<tr>
<td>2. Cattle extension programs and research for tropical agriculture</td>
<td>6–10</td>
</tr>
<tr>
<td>Dale R. ZoBell</td>
<td></td>
</tr>
<tr>
<td>3. The revolving fund system in sustainable community development</td>
<td>11–18</td>
</tr>
<tr>
<td>Grant Davidson, and E.R. Ørskov</td>
<td></td>
</tr>
<tr>
<td>4. Intensification of smallholder livestock production: Is it sustainable?</td>
<td>19–26</td>
</tr>
<tr>
<td>Hendrik M.J. Udo and Fokje Steenstra</td>
<td></td>
</tr>
<tr>
<td>5. The development of Danish agriculture and agribusiness : Lessons to be learned in a global perspective</td>
<td>27–35</td>
</tr>
<tr>
<td>Henning Otte Hansen and Mogens Lund</td>
<td></td>
</tr>
<tr>
<td>6. Genome research of gut bacteria, how to analyze and how to apply?</td>
<td>36–40</td>
</tr>
<tr>
<td>Tohru Suzuki, Kouta Sakaguchi, and Kazumasa Yasui</td>
<td></td>
</tr>
<tr>
<td>7. Animal production in Thailand: Challenges and potentials in global market</td>
<td>41–49</td>
</tr>
<tr>
<td>Yanin Opatpatanakit</td>
<td></td>
</tr>
<tr>
<td>8. Improvement of forage quality by means of molecular breeding in tropical grasses</td>
<td>50–56</td>
</tr>
<tr>
<td>Takahiro Gondo, Genki Ishigaki, Yasuyo Himuro, Naflatul Umami and Ryo Akashi</td>
<td></td>
</tr>
<tr>
<td>9. Advance research in function and healthy food from animal products – antihypertensive peptides derived from meat protein hydrolysates</td>
<td>57–63</td>
</tr>
<tr>
<td>Michio Muguruma, Jamhari, Yuny Erwanto, and Satoshi Kawahara</td>
<td></td>
</tr>
<tr>
<td><strong>SUPPORTING PAPERS</strong></td>
<td></td>
</tr>
<tr>
<td>Animal Feed and Nutrition</td>
<td></td>
</tr>
<tr>
<td>1. Exploration of pathogenic and non-Pathogenic Fungi on Alfalfa (<em>Medicago sativa</em> L)</td>
<td>64–67</td>
</tr>
<tr>
<td>Turrini Yudiarti, Sumarsono, and Didik Wisnu Widjajanto</td>
<td></td>
</tr>
<tr>
<td>2. Organic fertilizer application on performance and production of king grass in acid soil</td>
<td>68–71</td>
</tr>
<tr>
<td>Sumarsono, Syaiful Anwar, Didik Wisnu Widjajanto, and Susilo Budiyanto</td>
<td></td>
</tr>
</tbody>
</table>
3. The effect of using earthworm (*Lumbricus rubellus*) meal additives as growth promoters on protein digestibility and performance of intestinal villi

*Hardi Julendra, Zuprizal, and Supadmo* ................................................................. 72 – 78

4. Fermentation of Jatropha kernel cake (*Jatropha curcas L.*) using varieties of fungi on its chemical compositions, concentration of phorbolester, and digestibility

*Fatmawati, Hari Hartadi, and R. Djoko Soetrisno* ......................................................... 79 – 88

5. Effect of protected crude palm oil on rumen microbial activities and methane production

*Nafly C. Tiven, Lies Mira Yusianti, Rusman, and Umar Santoso* ...................................... 89 – 94

6. Fermentation parameters and total gas production of some rumen protected fat-protein


7. Dietary energy utilization of Local Sheep fed complete feed consisting of agricultural and agroindustrial by-products


8. Reduction of phytic acid and aflatoxin content of rice bran through fermentation *rhizopus* spp. Combined with deproteinated-chitin waste addition

*Ahmad Sofyan, Ema Damayanti and Hardi Julendra* ...................................................... 104 – 108

9. Implementation of fermented rice bran as flavor enhancer additive and its effect on feed utilization and cattle performance

*L. Istiqomah, A. Febrisiantosa, A. Sofyan, and E. Damayanti* .......................................... 109 – 114

10. The use of kume grass (sorghum plumosum var. Timorense) bioconverted with white-rot fungi (pleurotus ostreatus) fed on Local Goat in East Nusa Tenggara


11. The use of local-fodder based supplement and agricultural by-product for cattle


12. The use of kume grass (sorghum plumosum var. timorense) to substitute king grass (peranisetum purpureoides) fed on Bali Cattle in East Nusa Tenggara


13. The use of zeolite in low protein diet added with critical amino acids to reduce pollution

*Candra Elia Puspasari, Wihanoyo, and Supadmo* ......................................................... 124 – 148

14. Effects of substitution of Elephant grass by corn waste and coffee pulp as basal diet on nutrient intake and digestibility in young male Ongole crossbred cattle

*Dicky Pamungkas, Ristianto Utomo, Nono Ngadjiyono, and Muhammad Winugroho* ........ 129 – 134

15. Effect of lactic acid bacteria inoculants applications to the quality and chemical composition silage waste of carrot plant (*Daucus carota*)

*Badat Muwakhd* ........................................................................................................... 135 – 140

16. The content of phytoestrogen on legume plants

*Bateba M.W. Tiro, Suwijiyo Pramono, Hari Hartadi, Djoko Soetrisno, and Endang Baliarti* .......................................................................................................................... 141 – 145

17. Chemical composition and digestibility (*in vitro*) of cocoa pod husk (*theobroma cocoa* l.) Fermented with *aspergillus niger*

*F.F. Munier, H. Hartadi, and I.G.S. Budisatria* ..................................................................... 146 – 154
18. Intake and digestibility of feed in lamb of Sumatera composite breed when the commercial concentrate diet were substituted by gliricidia dan rice bran
Dwi Yulistiani and Wisri Puastuti .......................................................... 155 - 158

19. Fermentative gas production of different feeds collected during wet and dry seasons when incubated with rumen fluid from Rusa Timor (Cervus timorensis)
M. S. Arifuddin, R. Utomo, H. Hartadi, and Damry .................................. 159 - 164

20. Effect of fed complete feed plus on quality and milk production of dairy cow

21. In Vitro gas production of fermented cacao pod (Theobroma Cacao) added with cellulolytic inoculum from cattle rumen fluid
Chusnul Hanim, L.M. Yusati, and V.P. Budyastuti .................................... 171 - 176

22. Hibiscus Schizopetalus as saponin source, reduce protozoa number and increase microbial protein synthesis on in vitro sheep rumen fermentation
Asih Kurniawati and Nafiatal Umami .................................................... 177 - 182

23. The effect of gliricidia or mixture of rice bran and copra meal supplementation on feed intake, digestibility and live weight gain of early weaned Bali Calves fed A, Mulato grass
Marseyto, Muhammad Ilyas Mumu, and Yohan Rusiyantono .......................... 183 - 188

24. A comparison of feeding management practices of beef cattle smallholders in lowland and upland sites in East Java

25. The effect of ketepeng cina leaf (cassia alata I), as a source of anthraquinone, methanogenesis inhibitor agent on rumen microbial protein synthesis for beef cattle in Sedyo Rukun farmer group
Lies Mira Yusati, Zaenal Bachrudin, Chusnul Hanim, and Lila Indriana ............ 196 - 200

26. The effects of feed restriction severity on compensatory growth of goat kids in Bushehr Province, Iran
Mahmoud Dashtizadeh, Azizollah Kamalzadeh, Mohammad Hadi Sadeghi, Amir Arsalan Kamali, and Abdolmehtdi Kabirifard .............................. 201 - 207

27. Fermentation quality of king grass (Pennisetum Purpureophoides) ensiled with epiphytic lactic acid bacteria and tannin of acacia
B. Santoso, B. Tj. Hariadi, H. Manik and H. Abubakar ............................... 208 - 214

28. The effect of methionine on glutathion production to eliminate aflatoxin B1 toxicity
Yunianta, Ali Agus, Nuryono, and Zuprizal ............................................. 215 - 220

29. Rice bran fermentation tecnology and soya bean oil suplementation of transfer protection fatty acid omega-3 of unsaturated fatty acids conten of milk dairy cow
Sudibya .......................................................... 221 - 226

30. Growth performance and blood profile of african cat fish fed sweet potato (ipomoea batatas) leaf meal
Olaniyi Christianah Oludayo .............................................................. 227 - 232

31. Application of complete feed formulated from agriculture by-products with undergraded protein supplementation on beef cattle productivity
Bambang Suhartanto, B.P. Widyobroto, I.G.S. Budisatria, Kustantinah, and R. Utomo .............................................................. 233- 238
32. The effect of green tea extract (Camellia sinensis) supplementation on blood profiles and lipid oxidation in broilers fed high pufa diet
   Isti Astuti, Supadmo, Sugeng Riyanto, Supriyadi ............................................. 239 - 242

33. The role of lactic acid bacteria on silage duration process and rumen content silage quality
   Isnandar, R. Utomo, S. Chuzaeim, E. Sutariningsih, and L.M. Yusianti .................. 243 – 249

34. Replacing enzose by corn grains: impact on nutrients utilization and weight gain in growing buffalo calves
   M.Nisa, M.Aasif Shahzad, and M.Sarwar ................................................................... 250 – 256

35. Nutrients utilization, nitrogen dynamics and weight gain in growing buffalo calves fed graded replacement of urea by corn steep liquor
   M.Aasif Shahzad, M.Nisa, and M.Sarwar ................................................................. 257 – 261

36. Production and nutritive value of mulberry hay as potential feed supplement for ruminants
   Z.A. Jelan and A.R. Alimon ...................................................................................... 262 – 265

37. The retention of copper in sheep fed palm kernel cake supplemented with molybdenum, molybdenum plus sulphur and zinc
   A.R. Alimon, R.A. Al-kirshi and Z.A. Jelan .............................................................. 266 - 268

38. Utilization of complete feed based on fermented rice straw for australian commercial cross steer on carcass and meat quality
   Bambang Suwignyo, Ristianto Utomo, Yuny Erwanto and Ali Agus ....................... 269 – 273

39. The measurement of rate of passage using different pairs of alkane as markers for sheep fed hay or fresh grass
   A. Kustantinah, R.W. Mayes, and E.R. Orskov .......................................................... 274 – 281

40. Aflatoxin m1 excretion in the milk of tropical dairy cow fed contaminated aflatoxin b1 in the diet

Poultry Production

1. The interaction of dietary lysine and temperature on egg laying performance of broiler breeders
   Abdulameer Al-Saffar ......................................................................................... 286 – 290

2. Digestible methionine requirement for performance and carcass yield of broiler finisher
   N.G.A. Mulyantini ..................................................................................................... 291 – 295

3. Resource use efficiency in poultry production in Bureti District, Kenya

4. In vitro evaluation of phytogenic potential of seed from mango (Mangifera indica), moringa (Moringa oleifera) and sweet apple (Annona squamosa) for poultry
   Rusdi, Asriani Hasanuddin, Rosmiaty Arief ............................................................. 303 - 307

5. The effect of adding vitamin C and E in native chicken semen extender stored at temperature 4 °C on semen quality and egg fertility
   Widya Asmarawati, Ismaya, and Tri Yuwanta ....................................................... 308 – 313
6. The effects of single lactic acid bacteria probiotic supplementation on intestinal mucosa profile and immune response in broilers  
   **Bambang Ariyadi and Sri Harimurti** ................................................................. 314 – 319

7. Identification of single nucleotide polymorphism of gen insulin-like growth factor binding protein 2 on growth of native chicken  
   **Sri Sudaryati, Jafendi HP Sidadolog, Wihandoyo, and Wayan Tunas Artama** ........... 320 - 324

8. Cassava leaf meal inclusion in palm kernel meal diet could improve egg yolk color in post-molted native laying hens  
   **Adrizal, S. Fakhri, R. Murni, Yatno, T. Maranata, S. Asby, Yusrizal, and C. R. Angel** ................................................................. 325 – 331

9. Egg production responses of laying hens to feed medicinal herbs after peak of production  

10. Systems of poultry husbandry  
    **C.A. Bailey, S.Y.F.G. Dillak, S. Sembiring and Y.L. Henuk** ......................................................... 335 – 341

11. Ovulation and oviposition patterns in quail (*Cortunix Cortunix Japonica*)  
    **S.Y.F.G. Dillak, A. Pigawahi, and Y.L. Henuk** ..................................................... 342 – 345

12. Evaluation of tofu waste treated with fermentation and enzyme supplementation in broiler chickens  
    **B. Sundu, Baharuddin and M. Basri** ................................................................. 346 – 349

13. Influence of grit on performance of local chicken under intensive management system  
    **Jublin Franzina Bale-Therik, Cytske Sabuna** ..................................................... 350 - 353

14. The growth and productivity of selected kampung chicken  
    **Heti Resnawati and Tike Sartika** ........................................................................... 354 – 357

15. Effect of divergent selection body weight to egg production during the six generation and GH gene polymorphism quail (*Coturnix coturnix japonica*)  
    **Ning Setiati, J.H.P. Sidadolog, T. Hartatik and T. Yuwanta** ................................. 358 – 363

16. Feeding management evaluation of duck farmer group in Brebes  
    **Heru Sasonko** ......................................................................................................... 364 – 367

17. Heterosis and combining ability for body weight and feed conversion in four genetic groups of native chicken  
    **Franky M.S. Telupere** ......................................................................................... 368 – 373

18. The implementation of forced molting technology on rejected laying hens for the people discharged from employment (a case study at Duwet Village, Klaten, Indonesia)  
    **Ali Mursyid Wahyu Mulyono, Sri Hartati, Ahimsa Kandi Sariri, and Engkus Ainus Yakin** .... 374 – 379

19. Growth performance of Maleo birds (*Macrocephalon maleo*) by Means of feeding control in the captivity  
    **Hafsah, Tri Yuwanta, and Kustono** ............................................................... 380 - 384

20. Egg production and quality of Kedu chicken based on plumage color that reared intensively  
    **Ismoyowati, Dadang Mulyadi Saleh, Rosidi** ......................................................... 385 - 390

21. Effect of indigenous lactic acid bacteria probiotics on broiler performance  
    **Sri Harimurti, Nasroedan, Endang Sutriswati Rahayu, Kurniasih** ............... 391 - 394
22. Effects of zinc supplementation on laying performance of hens  
O.M.O. Idowu ........................................................................................................ 395 - 397

23. Effect of different level of rice polishing in combination with phytase and acidifier on performance and shell quality in layer chickens  
Bayu Sesarahardian, Osfar Sjoefjan and Eko Widodo ........................................ 398 - 402

PART II

Livestock Production

1. Exterior characteristics of Kejobong goats kept by farmers  
I Gede Suparta Budisatria, Panjono, Ali Agus, Lies Mira Yusianti, and Sumadi ........ 403 - 410

2. The effect of goat-sharing system on the performance of farmer groups raising etawah cross bred goats – a case study in ‘Sukorejo’, Girikerto, Turi, Sleman  
Yuni Suranindyah, Kustantinah, and E.R. Orskov ................................................ 411 - 414

3. Growth and carcass production of Ongole grade cattle and Simmental Ongole crossbred cattle growing in a feedlot system  
Mateus da Cruz de Carvalho, Nono Ngadiyono, and Soeparno ................................ 415 - 422

4. Available herbage sustainability under soil and water conservation for development of small ruminants  
Sutarno, Sumarsono, Widiyati Slamet, and Soeparno ........................................... 423 - 426

5. A study on some aspects of equine husbandry in the Punjab-Pakistan  
Arshad Iqbal, Asif Hameed, M.Younas, Bakht B. Khan, and S.A.Bhatti ............... 427 - 432

6. Feeding strategies to increase growth of early weaned Bali calves in East Java  

7. Response of brahman crossbred cows and their calves kept under semi-intensive and fed them on local-fodder supplement in east Sumba Regency, East Nusa Tenggara Province  

8. The relationship between heart-chest girth, body length and shoulder height, and liveweight in Indonesian goats  
Asmuddin Natsir, Mawardi A. Asja, Nasrullah, Yusmasari, A. Nurbhayu, Peter Murray, and Roy Murray-Prior ................................................................. 441 - 445

9. Growth performance of Ongole grade (Peranakan Ongole) cattle in Indonesia  
Budi Haryanto and Dicky Pamungkas ................................................................. 446 - 451

10. Growth of carcass and carcass component of different slaughter weight of local ram  

11. Postpartum productivity of Simmental-Ongole crossed cows of the first generation compared to Ongole crossed cows kept by farmers  
E. Baliarti, W.T.H.M. Christoffor, and Soenardi ................................................. 455 - 459
12. The effect of supplementation of different lysine sources on the performance of weaned pigs from 4 up to 10 weeks of age
Risel Diana H. Likadja ................................................................. 460 – 463

13. Effect of fiber source on the performance of weaned pigs from 4 up to 10 weeks of age
Johanis Ly and Risel D.H. Likadja .................................................. 464 – 467

14. Influence the improvement of cattle feedlot production system to increase the welfare of feedlot farmers group in Indonesia through the implementation of integrated sustainability farming system
Joko Riyanto, Susi Dwi Widyawati, and Wara Pratitis ........................................ 468 – 473

15. Breeding *Bos* sondaicus d’Alton cattle in eastern Indonesia: cattle growth
Totok B. Julianto, Tanda Panjaitan, Geoffry Fordyce, and Dennis Poppi ........... 474 – 477

16. Breeding Bos Javaunicus d’Alton cattle in eastern Indonesia cattle control, diets, draught use and feeding
Tanda Panjaitan, Geoffry Fordyce, Dennis Poppi .......................................... 478 – 482

17. Breeding *Bos javanicus* d’Alton cattle in eastern Indonesia: Monitoring village cattle
Dennis Poppi, Tanda Panjaitan, Dahlanuddin, and Geoffry Fordyce ................. 483 – 487

18. Application of non linear models in estimating growth curves of body weight and sizes of Holstein-Friesian female cattle
Nia Kurniawan, and Anneke Anggraeni ................................................................ 488 – 496


20. Diversity on the exterior performance of crossbred cattle kept by farmers in central Java

21. Alternative control for endoparasites infection in goats by feeding fresh matured and immature leaves of *Terminalia catappa*
Mohd Azrul Lokman, and Mohd Effendy Abd. Wahid .............................................. 509 – 514

22. Growth of nine month old male buffalo calves as affected by different crude protein and energy concentrations
M. Sarwar, M. A. Shahzad, N.A.Tauqir, and M. Nisa ............................................. 515 – 520

23. Performance of lactating buffaloes as affected by varying concentrations of essential amino acids
N.A.Tauqir, M.A.Shahzad, M.Nisa, M.Sarwar, H.A. Saddiqi, M. Fayyaz, and M.A Tipu ................................................................. 521 - 526

Animal Physiology, Reproduction, and Genetics

1. Seasonal investigation of serum magnesium concentration in native cattle at Western Azerbaijan Province, Iran
M.R. Valilou and A.R. Rotfi .................................................................................. 527 – 530

2. Detection of *Toxoplasma gondii* based on sequence r529 and sagl gene probe
Asmarani Kusumawati, Harto Widodo, Nafratilova Septiana, and Sri Hartati ........ 531 - 534

3. Reproductive performance of dairy cows in Yogyakarta Province based on balanced ration given
Ahmad Pramono, Kustono, and hari Hartadi ......................................................... 535 – 540
4. Breeding programme development of Bali cattle at P3Bali  
Andoyo Supriyantono, Luqman hakim, Suyadi, and Ismudiono ........................................... 541 - 546

5. Friesian holstein imported cows: physiological character and blood composition based on altitude difference  
Ratna Dewi Mundingsari, Adiarto, and Soenarjo Keman ............................................................. 547 – 551

6. Breeding value of Friesian Holstein bulls in PT. Naksara Kejora Rowoseneng, Temanggung, Central Java  
Hasyim Mulyadi, Indrawati Mei P., and RR. Mahardika N.P. ....................................................... 552 – 555

7. Genetic potency of weaning weight of boerawa F1, backcross 1, and backcross 2 does at breeding centre, Tanggamus Regency, Lampung Province  
Sulastri ............................................................................................................................................. 556 - 560

8. Distribution of population and production estimate of some cattle breeds at Yogyakarta Province, Indonesia  
Sumadi, Tety Hartatik, and Sulastri ................................................................................................ 561 - 564

9. In vitro fresh sperm preparation for maintaining sperm viability at storage temperature of 14°C using tannin supplementation of lamtoro leaves  
Mirajuddin, Kustono, Ismaya, and A. Budiyanto .............................................................................. 565 - 571

10. Phenotype and phylogenetic studies of local cattle in pacitan district, East Java, Indonesia  
Muhammad Cahyadi, and Tety Hartatik .......................................................................................... 572 - 577

11. The exploration of genetic characteristics on Madura cattle  
T. Hartatik, T. S. M. Widi, Ismaya, D.T. Widayati and E. Baliarti ................................................ 578 - 584

12. Breeding Bos javanicus d’Alton cattle in Eastern Indonesia: Cattle reproduction  
Geoffry Fordyce, Tanda Panjaitan, Totok B. Julianto, Eliza Kurtz, and Dennis Poppi .................. 585 - 589

13. Improvement quality of Bligon goat sperm trough separation by albumen  
Sigit Bintara, Soenarjo Keman, Sumadi, and Ali Agus ................................................................ 590 - 594

14. Correlation between plasma progesterone concentrations and fecal Progestins during the estrus cycle of Kedah Kelantan cows  

15. Effect of PGF2ɑ, or CIDR on ovarian follicular development during estrous cycle in goats  
Muhammad Modu Bukar, Rosnina Yusoff, Abd Wahid Haron, Gurmeet Kaur Dhaliwal, Mohammed Ariff Omar, Nur Husien Yimer, Mohd Azam Khan Gorim Khan ................................................................................................................................. 599 - 602

16. The use of frozen semen of Holstein-Friesian bulls with the BB genotype of the kappa casein gene in Indonesia  
A. Anggraeni, C. Sumantri, and E. Andreas ..................................................................................... 603 - 608

17. Effect of haylage made of kume grass standinghay fermented with liquid palm sugar and local chicken manure on semen quality and scrotum circumference of male local goat  
Henderiana L.L. Belli and Nathan G.F. Katipan ............................................................................... 609 - 613

18. The early identification of twinning trait genes on Indonesian local beef cattle  
Aryogi, Endang Baliarti, Sumadi, and Kustono ............................................................................. 614 - 622
Technology of Animal Products

1. The development of ripened cheese containing lactic acid bacteria: the effect on chemical composition, acid production and sensory value
   Tridjoko Wisnu Murti ................................................................. 631 - 637

2. The restructured of local beef of low quality with different binders, fat emulsifiers and fortification with vitamin a in beef burger
   Setiyono and Soeparno ................................................................. 638 - 643

3. The using of extract rabbits stomachs in the making goat milk cheese ripened with Lactobacillus Acidophilus
   Inda Dewata Sari, Nuriyani and Indratningsih ............................................ 644 - 648

4. Effect of broiler age and extraction temperature on characteristic chicken feet skin gelatin
   Muhammad Taufik, Suharjono Triatmojo, Yuny Erwanto, Umar Santoso ................. 649 - 656

5. Quality changes of burger from vegetable, wheat flour, rice flour with fat emulsion during frozen storage

6. Polymerization of meat and Tempeh protein using transglutaminase and their potency as an antihipertency and antioxidant agent
   Yuny Erwanto, Jamhari dan Rusman .......................................................... 663 - 670

7. The application of local dahlia tuber (Dahlia pinnata L.) as prebiotics for improving viability of probiotics Bifidobacterium bifidum in yoghurt
   Widodo, Nosa Septiana Anindita, Endang Wahyuni, and Indratningsih ................. 671 - 676

Extension, Community Development and Agribusiness

1. Elephant Camps and their impacts to community: Case study in Keud Chang, Chiang Mai Province, Thailand
   Weerapon Thongma and Budi Guntoro ........................................................................ 677 - 682

2. Soft technology innovation for farmer empowerment to bring about practice change in an agricultural r&d project: lesson learnt from Eastern Indonesia
   Nurul Hilmiati, Elske van de Fliert, Medo Kote, Debora Kana Hau, Toni Basuki ......... 683 - 690

3. The effects of dairy cattle ownership and farmers’ demography factors on the evacuation moving farmers’ behavior at Merapi volcano area (case study at Kaliadem Sub Village, Yogyakarta, Indonesia)
   Siti Andarwati and F. Trisakti Haryadi ........................................................................ 691 - 694
4. Farmers’ profile and exterior characteristic of female Moa Buffaloes in Moa Island, Maluku Province
Justhinus Pipiana, Endang Baliarti, and I Gede Suparta Budisatria ........................................ 695 – 701

5. Economic analysis of on-farm feeding strategies to increase post-weaning live weight gain of Bali calves
Atien Priyanti, Simon Quigley, Marsetyo, Dicky Pamungkas, Dahlanuddin, Esnawan Budisantoso, and Dennis Poppi .................................................. 702 – 708

6. The role of livestock service in order to cattle agribusiness development in regency of Kupang
Maurinus Wilhelmus Gili Tibo ................................................................. 709 – 716

7. Factors with the purchase of meat by consumers in Makassar, Sulawesi
Nasrullah, Yusmasari, A. Nurhayu, Asmuddin Natsir, Mawardi A. Asja, Roy Murray-Prior, and Peter Murray .......................................................... 717 – 724

8. Goat supply from Enrekang, South Sulawesi to East Kalimantan: a long and winding road
Mawardi A. Asja, Asmuddin Natsir, Roy Murray-Prior, Peter Murray, Nasrullah, Yusmasari, and A. Nurhayu .......................................................... 725 – 732

9. Goat meat consumption in Makassar, Sulawesi: Important for religious and cultural ceremonies, but many consider it a health risk
Roy Murray-Prior, Asmuddin Natsir, Mawardi A. Asja, Nasrullah, Yusmasari, A. Nurhayu, and Peter Murray .......................................................... 733 – 740

10. Marketing practices of smallholder beef cattle producers in east java

11. Empowerment of goat farming: Lessons learnt from the development of goat farming group of Peranakan Etawah Gumelar Banyumas
Akhmad Sodiq ....................................................................................... 747 – 752

12. Performance of credit program to small dairy cattle development in Indonesia
Rini Widiati ........................................................................................ 753 – 758

13. Analysis of demand of broiler meat in Central Java
Nurdayati, Sudi Nurtini, Masyhuri, and Rini Widiati .......................................................... 759 – 762

14. Decision making model analysis of technology adoption: empirical study on milk pasteurization retailer behavior
Januar Tri Sukarna, Suci Paramitasari Syahlanfi, and Ahnadi ............................................ 763 – 766

15. An education management model based on cognitive learning for small dairy farmers in the tropics
Viriya Munprasert, Phahol Sakkatat, Varaporn Punyavadee, Siriporn Kiratkarnkul and Dumrong Leenanuruksa .......................................................... 767 – 770

16. Participation of women farmers on beef cattle farming management in Pandan Mulyo Group, Bantul, Yogyakarta
Ida Wulandari, Budi Guntoro, and Endang Sulastri .......................................................... 771 – 777

17. The sources of dairy cows and concentrate feed among the dairy farmers in Sleman Regency, Yogyakarta
Endang Sulastri and Budi Guntoro ....................................................................................... 778 – 780

xvi
18. Information access among chicken and cattle farmers in Gunung Kidul Yogyakarta and Ngada East Nusa Tenggara

Budi Guntoro, Fathul Wahid, Ali Agus, and Stein Kristiansen ........................................... 781 – 784

Reviews

1. The use of gewang tree (corypha elata robx) as feed for livestock in the tropics
Maritje A. Hilakore, U Ginting-Monthe, and Y.L. Henuk ....................................................... 785 – 789

2. Optimizing nutrition of commercial livestock for minimal negative impact on the environment through precision feed formulation
Y.L. Henuk, S.Y.F.G. Dillak, S. Sembiring and C.A. Bailey ....................................................... 790 – 794

3. Performance and prospect of beef cattle development in Central Java
W. Roessali, Masyhuri, Sudi Nurtini, dan D.H. Darwanto ....................................................... 795 – 801

4. Livestock husbandry in India: a blessing for poor
Nizamuddin Khan, Anisur Rehman, Md. Asif Iqubal and Mohd. Sadiq Salman .................. 802 – 807

5. Brown midrib resistance (BMR) corn
D. Soetrisno, M.H. Shane, C.M., Dschack, J.-S. Eun, and R.Z. Dale ........................................ 808 - 814

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Information access among chicken and cattle farmers in Gunung Kidul Yogyakarta and Ngada East Nusa Tenggara1

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ABSTRACT: The current study aims to identify level of knowledge and sources of knowledge needed by chicken and cattle farmer to promote innovativeness and possible dissemination channels of knowledge. It is expected that results of the study give a better portrait of chicken and cattle farming and could be useful inputs for policies formulation. Based on data from 149 farmers in two districts (Gunungkidul and Ngada) and interviews with key players, we find that knowledge on marketing, feed management, healthcare and reproduction are determinant of innovativeness. Capital is still an unsolved classic problem and hence it is found that knowledge on capital has no significant contribution to innovativeness. Friends/group and extension workers are considered as the most important source of knowledge, while only limited farmers who utilize media as source of relevant knowledge.

Key words: chicken and cow farming, knowledge, entry barriers, innovation, Indonesia

INTRODUCTION

From various parts of the developing world we see that farmers show weak supply responses to allegedly favourable market incentives. Deregulation policies tend to increase levels of inequality in society and poverty of smallholders in poor areas. In Latin America, rural poverty is found to affect more people in many countries and to be considerably deeper than urban poverty (de Janvry and Sadoulet, 2000). In Indonesia, products from chicken and beef have been important element of cooking and nutrition for centuries. There is not a long tradition of commercial chicken and cattle farming, however. Usually, chicken and cattle farmers run their business with simple promises and traditional ways. Their innovativeness is very limited. With a sustained economic crisis and widespread unemployment in rural areas, and even dramatically amplified problems of under- and malnutrition, increased chicken and beef production could serve multiple purposes.

Previous empirical findings from Africa indicate that entry barriers can be high and blocking in the off-farm labour markets as well as in more advanced farm activities. This is due to requirements of investments, information/knowledge and skills, and various acquisition fees (Woldenhanna and Oskam 2001, Barrett et al. 2001, Abdulai and Rees 2001). The same tendencies are found in Latin America (Corral and Reardon 2001), and the process of ‘institutionalizing barriers to entry’ is reported also from geographical contexts in Asia (Goletti and Chabot 2000).

The current study aims to identify knowledge (know-what) needed by chicken and cattle farmer to promote innovativeness and possible dissemination channels of knowledge. It is expected that results of the study give a better portrait of chicken and cattle farming and could be useful inputs for policies formulation.

1 The authors would like to thank Directorate General of Higher Education, Department of Nasional Education of Indonesia for providing financial support for the study.
MATERIALS AND METHODS

Respondents of the current research were chicken and cattle farmers in two districts: Gunungkidul (in Province of Special Region of Yogyakarta) and Ngada (in East Nusa Tenggara). These two districts were selected due to their both differences and similarities. Both in Gunungkidul and Ngada, poverty was still common phenomenon. Chicken and cattle farming were found in significant number in both districts. However, several differences were also identified, such as level of centrality indicated by physical distance to sources of knowledge (e.g., universities, etc.).

In Gunungkidul, data collection were carried out in Kecamatan Wonosari, Playen, and Panggang, while in Ngada, data collection were collected in Kecamatan Bajawa and Bajawan Utara. In addition to farmers, in-depth interviews with relevant sources of information, such as extension workers and government officials (dinas) were also conducted.

The study deployed a mixed methodology combining quantitative and qualitative approaches. However, the quantitative approach is still dominant. Both quantitative and qualitative data were collected from various sources. Quantitative data obtained through survey to 149 chicken and cattle farmers in both districts, while qualitative data provided by in-depth interviews and field observation.

A questionnaire as the main research instrument was developed and used previous research reviews as the basis. Preliminary interviews with farmers were also used to prepare the research instrument. In general, the questionnaire was divided into two parts: demographics and knowledge access.

Data obtained from survey were tabulated and analysed with help of a statistical package, SPSS. Quantitative data from in-depth interviews analysed using content analysis. Key themes in the interviews are identified and crosschecked with the quantitative data.

RESULTS AND DISCUSSION

Demographic Setting

Respondents of the research are 149 farmers, 108 from Gunungkidul and 41 from Ngada. Out of them, 38 are chicken farmers, 50 cattle farmers, and another 61 run both chicken and cattle farming businesses. As depicted in Table 1, most (60.4%) respondents are only with elementary school educational background and only 5.4%, which have higher education. It is also obvious that the level of education of farmers in Gunungkidul is higher than their counterpart in Ngada.

At average, age of the farmers is 52.6 years ranging from 25 to 80 years old. They have been in business of cattle farming for 21.2 years, and chicken farming for 20.6 years. Farmers in Gunungkidul have been in business longer than their counterpart in Ngada. Number of family members at average is five people and the monthly expenditure of most (39.5%) family is between Rp 1,000,000 and Rp 2,000,000. However, again, monthly expenditure of farmers in Gunungkidul is higher than in Ngada. Interestingly, only 1.3% farmers state that the chicken or cattle farming business is their main source of income. The vast majority (69.1%) of the farmers consider agriculture sector as their main source of income. In general, almost half (47.0%) of the farmers inherited the business from family, while another 45.0% started the business by their own. However, in Ngada, no farmers inherited the business from their ancestors.

Information Access

In general, level of information access or level of knowledge of the farmers are very low as described in Table 2. In the Likert scale, the study shows that access of farmer to the capital information is the lowest score (1.85). The highest score of information access is marketing (3.20). Access to the healthcare, feed management and reproduction management also minimum (lower than 3.00).

As shown in Table 3, the majority (71.14%) of farmers get knowledge from friends/group. Extension workers also play an important role (68.46%) in giving knowledge to the farmers. Aside, the self-learning also another source of knowledge (58.39%), followed by extension activities from private institutions (48.32%).
Table 1. Demographic information

<table>
<thead>
<tr>
<th>Item</th>
<th>Gunungkidul</th>
<th>Ngada</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Elementary school</td>
<td>59</td>
<td>54.6</td>
<td>31</td>
</tr>
<tr>
<td>- Junior high school</td>
<td>19</td>
<td>17.6</td>
<td>5</td>
</tr>
<tr>
<td>- Senior high school</td>
<td>24</td>
<td>22.2</td>
<td>3</td>
</tr>
<tr>
<td>- University</td>
<td>6</td>
<td>5.6</td>
<td>2</td>
</tr>
<tr>
<td><strong>Monthly expenditure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- &lt; Rp 500.000</td>
<td>1</td>
<td>0.9</td>
<td>29</td>
</tr>
<tr>
<td>- Rp 500.000-Rp 1.000.000</td>
<td>32</td>
<td>29.6</td>
<td>8</td>
</tr>
<tr>
<td>- Rp 1.000.000-Rp 2.000.000</td>
<td>57</td>
<td>52.8</td>
<td>1</td>
</tr>
<tr>
<td>- &gt; Rp 2.000.000</td>
<td>18</td>
<td>16.7</td>
<td>1</td>
</tr>
<tr>
<td><strong>Main source of income</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Agriculture</td>
<td>70</td>
<td>64.8</td>
<td>33</td>
</tr>
<tr>
<td>- Chicken/cow farming</td>
<td>2</td>
<td>1.9</td>
<td>0</td>
</tr>
<tr>
<td>- Other</td>
<td>36</td>
<td>33.3</td>
<td>8</td>
</tr>
<tr>
<td><strong>Origin of business</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Legacy</td>
<td>70</td>
<td>64.8</td>
<td>0</td>
</tr>
<tr>
<td>- Started by myself</td>
<td>36</td>
<td>33.3</td>
<td>31</td>
</tr>
<tr>
<td>- Started with friends/group</td>
<td>2</td>
<td>1.9</td>
<td>2</td>
</tr>
<tr>
<td>- Other</td>
<td>0</td>
<td>0.0</td>
<td>8</td>
</tr>
<tr>
<td><strong>Mean SD Mean SD Mean SD</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>55.3</td>
<td>10.5</td>
<td>45.1</td>
</tr>
<tr>
<td>Family member</td>
<td>4.2</td>
<td>1.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Number of employees (person)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cow farming</td>
<td>1.8</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>- Chicken farming</td>
<td>1.5</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Years in business</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cow farming</td>
<td>22.2</td>
<td>11.8</td>
<td>17.5</td>
</tr>
<tr>
<td>- Chicken farming</td>
<td>23.3</td>
<td>11.2</td>
<td>8.8</td>
</tr>
</tbody>
</table>

Table 2. Level of knowledge

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Gunungkidul*</th>
<th>Ngada*</th>
<th>All*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>1.90</td>
<td>1.67</td>
<td>1.85</td>
</tr>
<tr>
<td>Health care</td>
<td>2.65</td>
<td>1.87</td>
<td>2.48</td>
</tr>
<tr>
<td>Marketing</td>
<td>3.58</td>
<td>1.83</td>
<td>3.20</td>
</tr>
<tr>
<td>Feed management</td>
<td>3.19</td>
<td>1.57</td>
<td>2.83</td>
</tr>
<tr>
<td>Reproduction management</td>
<td>3.08</td>
<td>1.47</td>
<td>2.73</td>
</tr>
</tbody>
</table>

*Measured using 5-point Likert scale (1=novice, 5=expert)

Table 3. Source of knowledge

<table>
<thead>
<tr>
<th>No</th>
<th>Source of knowledge</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Friends/group</td>
<td>106</td>
<td>71.14</td>
</tr>
<tr>
<td>2</td>
<td>Extension workers</td>
<td>102</td>
<td>68.46</td>
</tr>
<tr>
<td>3</td>
<td>Self learning</td>
<td>87</td>
<td>58.39</td>
</tr>
<tr>
<td>4</td>
<td>Private institutions</td>
<td>72</td>
<td>48.32</td>
</tr>
<tr>
<td>5</td>
<td>Non-formal education/training</td>
<td>62</td>
<td>41.61</td>
</tr>
<tr>
<td>6</td>
<td>Inherited knowledge</td>
<td>54</td>
<td>36.24</td>
</tr>
<tr>
<td>7</td>
<td>Information from schools/universities</td>
<td>49</td>
<td>32.89</td>
</tr>
<tr>
<td>8</td>
<td>Television</td>
<td>41</td>
<td>27.52</td>
</tr>
<tr>
<td>9</td>
<td>Radio</td>
<td>41</td>
<td>27.52</td>
</tr>
<tr>
<td>10</td>
<td>Formal education</td>
<td>13</td>
<td>8.72</td>
</tr>
<tr>
<td>11</td>
<td>Newspaper/magazine</td>
<td>8</td>
<td>5.37</td>
</tr>
<tr>
<td>12</td>
<td>Internet</td>
<td>3</td>
<td>2.01</td>
</tr>
</tbody>
</table>
Figure 1. Source and domain of knowledge

Print and electronic media have not become the important source of knowledge yet. Twenty seven point fifty two percent of the farmers get information from television and radio. Only 2.01% farmers use internet as source of knowledge.

From the domain of knowledge that gotten from various sources, the most information of capital knowledge coming from friends/farmer group as shown in Figure 1. Other Sources of capital information are private institutions and extension workers, respectively. Knowledge of healthcare from extension workers, followed by friends/group, and self learning. Extension workers are also the most important of knowledge source for both marketing and feed management.

CONCLUSION

The sources of knowledge which relevant to gain the innovation are in the domains of marketing, feed management, animal healthcare, and animal reproduction. Friends/group and extension workers are the important for all domain of knowledge.

LITERATURE CITED


Certificate

It's hereby certified that

Budi Guntoro

has participated as presenter in The 5th International Seminar on Tropical Animal Production (ISTAP)

“Community Empowerment And Tropical Animal Industry”

on October 19 - 22, 2010 in Yogyakarta

held by Faculty of Animal Science, Universitas Gadjah Mada, Indonesia

Faculty of Animal Science
Universitas Gadjah Mada,
Dean

Prof. Dr. Tri Yuwanta

Organizing Committee,
Chairman

Budi Guntoro, Ph. D