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Proceeding of the 3rd International Seminar on Animal Industry,
Bogor, 17-18 September 2015

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FOREWORD FROM CHAIRPERSON OF ORGANIZING COMMITTEE

Distinguished,

Rector of Bogor Agricultural University, Prof. Dr. Ir. Herry Sulardiyanto, M.Sc.

Director General of Livestock Services and Animal Health, Ministry of Agriculture, Republic of Indonesia, Prof. Dr. Ir. Muladno, M.S.A.

Dean of Animal Science Faculty, Bogor Agricultural University, Prof. Dr. Luki Abdullah M Agr.Sci.

All participants of the International Seminar on Animal Industry 2015

Good morning ladies and gentlemen,

It is my great pleasure to welcome you all, distinguished guests, speakers and participants, to the Third International Seminar on Animal Industry (ISAII 3rd, 2015) held at the IPB International Convention Center, Bogor Indonesia. This seminar with the theme “Sustainable Animal Production for Better Human Welfare and Environment” is organized by Faculty of Animal Science, Bogor Agricultural University in collaboration with Association of Indonesia Animal Scientists.

Following the recommendations from ISAII 1 and ISAII 2, which were held in Indonesia in 2009 and 2012, the strategic issues of ISAII 3rd is emphasized on animal production systems and technology and the use of natural resources in relation with environmental aspects, toward a sustainable animal production. There will be 97 papers presented during the two days seminar; 9 by invited speakers, 69 for oral and 28 for poster presentations. The speakers came from different countries including Australia, Egypt, France, Korea, German, Netherlands, Indonesia, Malaysia, Nigeria, Pakistan, Thailand, USA.

This is a great opportunity for scientists, researchers, private sectors and policy makers to discuss, share information and experiences on interesting topics in animal production in a broad sense, including good farming practices, recent technologies and save animal products. I believe, there is an open window for initiating and strengthening collaboration among scientists and institutions during and after the seminar.

On behalf of the Organizing Committee, I would like to express my sincere appreciation and thanks to IPB, and some units within, including Institute of Research and Community Empowerment, Faculty of Animal Science, Department of Animal Production and Technology, Department of Nutrition and Feed Technology, Diploma Program, Management and Business Program for all advice and funding support.

The success of this seminar could only be achieved with all the valuable supports and sponsorship from some recognized institutions in this country. In this regards, I would like to address my greatful thanks to Directorate General of Livestock Services and Animal Health-Indonesia Ministry of Agriculture for funding support, and Infotel and Trobos, Green TV as promotion agency. To: Sierad Produce, Kaltim Prima Coal, BRLingin Life, Adaro Indonesia, Trouv Nutrition Indonesia, Nutricell Pasific, Sweni Transfer Indonesia, Charoen Phokphand, Wide & Pin, Pupuk Kujang, and ANTAM thank you so much with big appreciation, for having been part of this important event and such enormous contributions.

My recognition and gratitude are also forwarded to the Steering Committee for advice and assistanship, to international and national reviewers and the Scientific Committee for hard working and such great contribution. Last but not least, to all my dear colleagues of the Organizing Committee members, who have been working smartly and full of dedication and passion, to make this seminar a great successfull event.

To all participants, hopefully, the two days seminar may bring fresh ideas, and enhancing collaborations for future success toward sustainable animal production. Big apologies for any inconvenience during the seminar, wish you all having good times, and fruitful discussions.
During your short stay, please enjoy the surrounding of Bogor city, the Museum of Presidential Palace and
Historical Botanical Garden of Bogor.

Bogor, September 17th, 2015
The Isai 3rd 2015,
Chairperson of Organizing Committee
Asnath M. Fuhu
REMARKS FROM
DEAN OF ANIMAL SCIENCE FACULTY

Prof. Dr. Muladno, MSA
Director General of Livestock and Animal Health-Ministry of Agriculture Republic of Indonesia.

Prof. Dr. Ir. Herry Suhardiyanto, M.Sc.
Rector of IPB

Dr. Ir. Asnath Maria Fuah
Chairperson. The 3rd International Seminar on Animal Industry

Our Colleagues from Indonesian universities and research institutes,
Distinguished foreign participants and speakers,

Representative of livestock services officers of local government from all over Indonesia,
Distinguished guests, ladies and gentlemen.

Assalamu'alaikum warahmatullaahi wabarakatuh,

I am pleased to welcome you all to Bogor city for attending “The 3rd International Seminar on Animal Industry 2015” held at Faculty of Animal Science, Bogor Agricultural University (IPB). As the Dean of Faculty, I am also really honored to host this conference.

First, let me introduce briefly about Bogor city. Bogor is one of the major scientific and educational centers in Indonesia. A significant part of academic and research base was laid in the period of Dutch colonization. In particular, since the beginning of the 19th century there were established laboratories and professional schools focused primarily on improving the efficiency of the colonial agriculture. Similar to the prevailing profile of research and academic activity was retained in Bogor after gaining independence. As in the second half of 20th century, and in the 2000s strongest areas were Agricultural sciences, Biology, Animal and Veterinary Sciences. The main educational and scientific center with the utmost national importance is the Bogor Agricultural University (IPB). It is therefore the city regularly hosted various international events, such as international seminars and conferences.

I would like to express my gratitude to IPB for supporting us to hold this conference, and also to the organizing committee of the present conference for their hard work and persistence. I convey my sincere gratitude to all the parties which is supporting this event, such as Directorate General of Livestock and Animal Health-Ministry of Agriculture Republic of Indonesia, Infivet Trobos, Agrina, Green TV as promotion agency and Sierad Produce, Kaltim Prima Coal, BRIngin Life, Adaro Indonesia, Trouw Nutrition Indonesia, Nutricell Pasific, Sweni Transfer Indonesia, Charoen Phokphand, Wide & Pin, Pupuk Kujang, and ANTAM thank you so much with big appreciation, for having being part of this important event and such enormous contributions. I am very pleased to see here the delegates from various foreign countries as well as representatives from many domestic institutions.

I hope you find this conference and the city, both interesting and stimulating and that you enjoy meeting up with your professional colleagues as well as having pleasure time during your stay in Bogor.

Thank you very much and
Wassalamu’alaikum warahmatulaahi wabarakatuhu.

Bogor, 17 September 2015
Prof. Dr. Ir. Luki Abdullah, MSc.Agr
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<td><strong>Moderator</strong>: Dr. Rajesh Jha</td>
<td><strong>Moderator</strong>: Ummi Noorakimah</td>
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<td>Prof. I Wayan Tegutti W.</td>
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<td>Dr. Kai J. Kuchhtman</td>
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<td>Recent Advances in Gut Microbiology Research in Relation to Animal Nutrition</td>
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<td>Social Economic and Policy in Animal Industry</td>
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<td>Effect of drinking gambir extract (<em>Uncaria gambir Roxb</em>) as Antioxidant on Performance of 40-43 Weeks Old of Laying Hens</td>
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Women, Gender Equality in Livestock Development: Case Study from Papua and Central Java

J. Sumarti & A. M. Fadhil

Department of Communication Science and Community Development, Faculty of Human Ecology
Riau Agricultural University
Department of Animal Production and Technology, Faculty of Animal Science
Riau Agricultural University

Abstract

Livestock and its products accounted for 12 percent of the agricultural basic domestic products. The number of male and female workers increased by 2.19% and 3.54% per year respectively within the period of 2007-2011. Livestock is an entry point for promoting gender equality and women empowerment in rural areas. The objectives of this study were to analyze the function of livestock for men and women, various roles played by gender in livestock management, and gender issues, including women’s empowerment in livestock development. Rapid rural appraisal method was used to collect information from farmers including gender participants in Bintuni Bay, West Papua and Klatoen, Central Java. The results revealed that large animals were owned and managed by men, while small animals (goats, sheep and poultry) were mostly kept by women near the household. Women played significant contribution in management, processing and marketing of animals and products. Most of the decision making was by women, while men participated in coordinating activities related to large ruminants husbandry. More than 40% of women had access to economic resources, and often played significant roles in family income. The main constraints that prohibited women to actively involved as leaders in livestock organization were mainly due to social and cultural reasons. Participation of women in livestock activities could increase household income by 10 to 15%. Involved women in livestock sectors were essential, taking into account the level of knowledge there experiences, including specific trainings in livestock marketing and supply chain.

Keywords: gender equality, livestock development

Introduction

Government policy for livestock development in the framework of national food self-sufficiency are directed to the fulfillment of livestock-based food through community farming programs. Livestock commodities kept for food and the development of agricultural farming were included cattle, buffaloes, goats, and poultry. In the meantime, commodities for export were goats, sheep, pigs, and poultry (Director General of Animal Husbandry and Health or DGAH, 2014). In Indonesia, from 2008 to 2012, the livestock sub-sector and the results contributed to Gross Domestic Product (GDP) around 12% to the overall agriculture (Ministry of Agriculture, 2012).

Livestock enterprise was one of the main activities in rural areas, more villagers involved in this sub-sector along with the increased GDP. The members of male and female workers increased in the period 2007-2011, 2.19% and 3.54% per year respectively, showing that the number of females working in livestock sub-sector was higher than males. However, the employment in the livestock sub-sector in 2012 was dominated by males workers (56-58%) compared to females (42-44%). (DGAH, 2013). Livestock business and development were the entry point to promote gender equality and the empowerment of women in rural areas. Traditionally, the division of roles and responsibilities in the livestock business wasas follows: males for large livestock (cattle, buffaloes, goats) and females for small livestock (poultry). Community participation was still seen in the narrow context, and even there was still gender bias in the development, considering females to be inferior. Women’s participation in the agricultural development was not obvious and they seem to be in a position of being unable to develop their business (Sumarti, 2012). Hence, it is important for all development sectors to implement Presidential Instruction No. 9 of 2000 on Gender Mainstreaming (PUG) in development. This paper aimed to analyze: (1) the function of livestock for men and women; (2) a variety of gender roles in the livestock business; (3) gender issues occurring in livestock development programs; and (4) efforts to empower women in the livestock business.
Methods

The study was conducted in two different places: (1) Teluk Bintuni Regency in West Papua, specifically in Bintuni District (the kampongs of Igunjii, Gaya Baru, Argo Sigemay), and in Manimeri District (the kampongs of Atibo Pasamay, Banjar Ausoy); and (2) Klaten Regency in Central Java, specifically Jambakan village in Bayat District and Glagah village in Jatinom District. A qualitative approach was used, supported by quantitative data. The approach was carried out through the community case study method, using data collection techniques, in-depth interviews and group discussions on 5-15 household participants per kampong, adopted from Qorah and Sumarti, (2008). In Teluk Bintuni Regency, the quantitative data was obtained from 47 respondents who raised more than one type of livestock.

Results and Discussion

The Roles of Livestock

Livestock was still secondary part of farmers activities, indicated by the numbers and composition of livestock owned by households in the five kampongs of Teluk Bintuni, and two villages of Klaten Regency (Table 1).

Table 1. The numbers and composition of livestock in each village

<table>
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<tr>
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<th>Livestock species</th>
<th>Average no of livestock</th>
<th>Age Structure of native chicken</th>
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<td>Teluk Bintuni Regency</td>
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<tr>
<td>Igunjii</td>
<td>Native chicken, pigs</td>
<td>12</td>
<td>12% chicks, 7% young chickens, 81% hens and cocks</td>
</tr>
<tr>
<td>Gaya Baru</td>
<td>Native chicken, pig</td>
<td>34</td>
<td>27% chicks, 35% young chickens, 38% hens and cocks</td>
</tr>
<tr>
<td>Argo Sigemay</td>
<td>Native chicken, goats</td>
<td>15</td>
<td>58% chicks, 5% young chickens, 37% hens and cocks</td>
</tr>
<tr>
<td>Atibo Pasamay</td>
<td>Native chicken, pig</td>
<td>31</td>
<td>50% chicks, 20% young chickens and 30% hens and cocks</td>
</tr>
<tr>
<td>Banjar Ausoy</td>
<td>Native chicken, duck, cattle, goats</td>
<td>39</td>
<td>34% chicks, 14% young chickens and 52% hens and cocks</td>
</tr>
<tr>
<td>Klaten Regency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jambakan</td>
<td>Goat</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Glagah</td>
<td>Dairy cattle</td>
<td>n.a</td>
<td>n.a</td>
</tr>
</tbody>
</table>

The results indicated that livestock kept by farmers in Teluk Bintuni Regency quite varied, i.e. native chickens, pigs, goats, cattle, broiler, and duck; while farmers in Klaten raised only goats and dairy cows. The livestock diversity was determined by agro-ecological conditions, culture and the existing breeding programs. The Argo Sigemay and Banjar Ausoy were transmigration settlement unit areas, and most of them were Javanese community who were Muslim, and used to growing vegetables and rice. The residents of Igunjii, Gaya Baru, and Atibo Pasamay were Papuans, most of them were Christian, and used to planting annual crops and local plants like kasbi, petatas, taro in their gardens and yards. Jambakan and Glagah village in Central Java were poor areas which received Village Independent Food program. Jambakan was categorized as a dry land, got assistance from Government in goats management, while Glagah as a wetland area, received assistance in goats and dairy cows. Small livestock such as pigs, goats, and chickens were raised for family food security, and most activities were carried out by women, as also reported by Qorah and Sumarti (2008). However, when the livestock function was increasingly important for the family economic resources, then men will be more responsible. For Papuans, livestock business was still a secondary, part of their daily activities. The main economic activities were still characterized by hunting and gathering, such as collecting nuts, red fruits, and sago, hunting deer, and planting petatas, taro and kasbi in the fields. Chicken raising, selling live chickens or eggs were mostly done by women, while pig raising was done by men and women for the needs of customary parties where as Lestari and Agusta stated that decision
making for input and management by women. Pigs were sold to fulfill children school needs and Christmas celebrations. For Javanese community, both in transmigration areas and in the two villages in Klaten, dairy cows, and also goats, ducks and chicken were managed by men for family income.

The Division of Gender Roles in Livestock Business

The roles and responsibilities of men and women in the livestock business in Papuan and Javanese communities can be seen in Table 2.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Native Papuan</th>
<th>Java Transmigrant</th>
<th>Java - Klaten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing feed and drink for chickens</td>
<td>women</td>
<td>women</td>
<td>n.a</td>
</tr>
<tr>
<td>Taking care of chicks and sick birds</td>
<td>women</td>
<td>women and men</td>
<td>n.a</td>
</tr>
<tr>
<td>Herding birds out and back into the cage</td>
<td>women</td>
<td>women and men</td>
<td>n.a</td>
</tr>
<tr>
<td>Selling chickens and eggs</td>
<td>women</td>
<td>women and men</td>
<td>n.a</td>
</tr>
<tr>
<td>Feeding pigs</td>
<td>women</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Selling pigs</td>
<td>women and men</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Finding grass/ herding goats</td>
<td>-</td>
<td>men</td>
<td>women and men</td>
</tr>
<tr>
<td>Selling goats</td>
<td>-</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Feeding cattle</td>
<td>-</td>
<td>women and men</td>
<td>women and men</td>
</tr>
<tr>
<td>Cleaning the cattle stall</td>
<td>-</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Milking</td>
<td>-</td>
<td>-</td>
<td>women and men</td>
</tr>
<tr>
<td>Selling cow milk</td>
<td>-</td>
<td>-</td>
<td>women and men</td>
</tr>
</tbody>
</table>

The roles of Papuan women were mostly on poultry and pig-raising, while selling pigs was carried out by both women and men. Javanese transmigrants, women tended to raise chicken together with men, while for cattle and goats, men tended to be more responsible than women. In Klaten, goats were raised by men and women, but men were more responsible in cattle raising. This revealed that livestock as an extra family income was carried out by women, while the responsibility for main economic sources was by men, similar to the results of Fuah (1998) that women were more responsible for small livestock. There was no correlation between household economic status and access to benefits, similar to the report of Yuwono and Prasodjo (2013).

Gender Issues in Livestock Development Program

Gender equality in livestock development could be seen from the men and women access to and control over resources and benefits of the programs as shown in Table 3.

<table>
<thead>
<tr>
<th>Access to resources and benefits</th>
<th>Native Papuan</th>
<th>Java Transmigrant</th>
<th>Java -Klaten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Adat (communal)</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Input (seed, feed, vaccine)</td>
<td>women</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Training</td>
<td>women</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Farmer group</td>
<td>women</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Market</td>
<td>women</td>
<td>men, women</td>
<td>men</td>
</tr>
<tr>
<td>Income</td>
<td>women</td>
<td>women was</td>
<td>women</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control of resources and benefits</th>
<th>Adat (communal)</th>
<th>men</th>
<th>men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land</td>
<td>Adat (communal)</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Input (seed, feed, vaccine)</td>
<td>Men</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Training</td>
<td>Men</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Farmer group</td>
<td>Men</td>
<td>men</td>
<td>men</td>
</tr>
<tr>
<td>Market</td>
<td>women</td>
<td>equal</td>
<td>men</td>
</tr>
<tr>
<td>Income</td>
<td>equal</td>
<td>equal</td>
<td>men</td>
</tr>
</tbody>
</table>
A gender gap was found in the Papuan livestock business, where women had more access to resources and benefits, but the control remains in men's hands. Raising chicken was secondary, since the main activities were hunting and gathering. Gender gap also occurred in both Javanese transmigrants and Javanese in Klaten, for different reasons. Women worked on livestock, access to and control over the resources and benefits were more men-dominated. Many Papuans believed that women working only to help their husband to make a living. H.O (2007) stated that gender equality was the enjoyment of equal rights, opportunities and responsibility of men and women, boys and girls in all spheres of life. It was a fairness treatment for men and women, according to their respective needs and interests.

Conclusion

It can be concluded that: 1) Large animals were kept and managed by men, while goats, and poultry were more woman's domain; 2) Women were responsible in livestock management, processing and marketing; (3) Most work and decision-making of women took place at household level, while men participated in public meetings related to goat husbandry; 4) Women had access to economic resources, and were often important income earners for households. Women faced significant structural and cultural obstacles to becoming effective leaders and gaining access to significant roles in society.

References


