INTERNATIONAL CONFERENCE ON AGRIBUSINESS
DEVELOPMENT FOR HUMAN WELFARE 2016

Theme: "Small and Medium-sized Enterprises Competitiveness"

PROCEEDING INTERNATIONAL CONFERENCE
Agribusiness Development for Human Welfare

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Department of Agribusiness, Faculty of Agriculture
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DEVELOPMENT FOR
HUMAN WELFARE
“Small and Medium-sized
Enterprises Competitiveness”

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EDITOR FOREWORD

The economic integrations by ASEAN certainly have given a major influence on Small and Medium-sized Enterprises (SMEs). Beside economic integration in the form of free trade area (FTA) that has been going on since the early 2000s, economic integration in the form of ASEAN Economic Community (AEC) has been ongoing since the beginning of 2016. Through this integration, SMEs have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market.

In order to explore ideas, concept, and innovations related to the competitiveness of SMEs, International Conference on Agribusiness Development for Human Welfare (ADHW 2016) was held in Yogyakarta on May 14, 2016. The conference organized by Department of Agribusiness Universitas Muhammadiyah Yogyakarta, in collaboration with Department of Agribusiness and Information System Universiti Putra Malaysia, Department of Agro-Industrial Technology Kasetsart University, Department of Agriculture Socio-Economics Universitas Gadjah Mada, Department of Agriculture Socio-Economics of Universitas Brawijaya, Indonesian Society of Agriculture Economics, Agribusiness Association of Indonesia. Hopefully proceedings of ADHW 2016 provide stimulus for increasing competitiveness of SMEs in ASEAN, especially in Indonesia.

Furthermore, we are grateful to Allah, the Sustainer of all word, who always makes it easy for our affairs. We would like to acknowledge with thanks to all the institution and individual who joined with resources and efforts in organizing the conference that resulted in the papers which are published in this proceeding. Special thanks to all authors and discussants who contributed with their intellectual capital and responded to our call papers. Thanks and acknowledgment are also due to all reviewers of the conference who helped in evaluating submitted papers; and to the members of the Organization Committee, who ensured smooth execution of the event.

May 30, 2016

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PREFACE

Assalaamualaikum, Warahmatullaahi., Wabarakaatuh.

Dear Honorable Governor of Yogyakarta Special Province
Dear respectable Prof. Dr. Zainal Abidin Mohamed
Dear respectable Asist. Prof. Pornthipa Ongkunaruk
Dear respectable Rector of UMY Prof. Dr. Bambang Cipto, MA.
Dear all invited Guests, Speakers, and Participants of International seminar of ADHW 2016.

Alhamdulillah, all praise be to the Almighty God, so that we can be gathering here today at Muhammadiyah University of Yogyakarta in order to attend the Conference on Agribusiness Development for Human Welfare (ADHW) 2016.

Ladies and Gentlemen,

On behalf of the committee, I would like to say welcome to this International Conference on ADHW 2016 and thank you for attending our invitation.

Especially, we are grateful to invited speakers, Prof. Zainal Abidin Mohamed and Asist. Prof. Pornthipa Ongkunaruk, for their willingness to share information and thoughts in this conference. As a bit report, that this conference has been attended by 85 speakers coming from five countries.

This conference entitled “Small and Medium-sized Enterprise Competitiveness”. ASEAN Economic Community is the largest economic integration that is going to be implemented at the beginning of 2016 (December 31, 2015). Through this integration, SMEs will have opportunity to expand access to markets, technology, and capital. But at the same time SMEs are required to improve their competitiveness in order to survive in the market. We expect that this seminar is capable of producing thoughts building SMEs within ASEAN, especially Indonesia, to face the free trade.

This event can be done by support and efforts from all sides. Therefore, I would like to say thank you to all committee members having worked hard to conduct this event. We, as the organizer committee, do apologize when there is a shortage in conducting this event.

Wassalamualaikum, Warahmatullaahi., Wabarakaatuh.

Chairman
International Conference on ADHW 2016

Dr. Aris Slamet Widodo, SP., MSc.
WORDS OF WELCOME

Assalamu’alaikum warahmatullahi wabarakatuh

Alhamdulillah, all praise be to Allah SWT, who has given us His blessings so that this International Seminar of Agribusiness Development for Human Welfare (ADHW) 2016 entitled “Small and Medium-sized Enterprises Competitiveness” can be conducted. This International Conference is held in cooperation among Agribusiness Study Program of Muhammadiyah University of Yogyakarta with Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), and Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB).

Countries of ASEAN members like Indonesia, Malaysia, and Thailand have more than 90% Small and Medium-sized Enterprises (SMEs). In general, SMEs play important role in economic developments such as in terms of employment, added value, improve foreign exchange, and economic growth. For Indonesia, the role of SMEs is limited to employment and added value, while the foreign exchange from SMEs is still low. According to the General Director of SMEs of Industrial Ministry, in 2013 the total SMEs being able to pass through export market is just under 5 percent. For that required many breakthrough and innovation so that the role of SMEs becomes real economic development, especially in Indonesia, and generally in ASEAN countries.

On behalf of Agribusiness Department of Universitas Muhammadiyah Yogyakarta, we would like to express our gratitude Putra University of Malaysia (UPM), Kasetsart University (KU), Association of Indonesian Agricultural Economy (PERHEPI), Agribusiness Association of Indonesia (AAI), Universitas Gadjah Mada (UGM) and Universitas Brawijaya (UB) for all supports, sponsors, and all committee members having worked so hard that this International Conference can be conducted.

Hopefully, these sinergies coming from various parties can provide contribution for developing SMEs in Indonesia and other ASEAN countries as well.

Wassalamu’alaikum warhmatullahi wabarakatuh

Head of Agribusiness Department
Universitas Muhammadiyah Yogyakarta

Ir. Eni Istiyanti, MP.
Assalamu’alaikum Wr. Wb.
Salam sejahtera untuk kita semua.

Yang Saya hormati:
- Rektor Universitas Muhammadiyah Yogyakarta;
- Para Narasumber;
- Hadirin dan Para Peserta yang berbahagia,

Puji dan syukur marilah kita panjatkan kehadirat Allah SWT karena hanya atas limpahan rahmat serta karunia-Nya, kita dapat hadir pada kesempatan acara Konferensi Internasional “Agribusiness Development For Human Welfare” ini dalam keadaan sehat wal’afiat.

Pada kesempatan kali ini, secara ringkas Saya akan menyampaikan mengenai industri kecil menengah nasional yang menjadi tema pada pembukaan Seminar Internasional “Agribusiness Development For Human Welfare” ini.

**Hadirin dan Saudara-saudara sekalian yang Saya hormati**, 

Berdasarkan data BPS, pertumbuhan industri pengolahan nonmigas pada tahun 2015 secara kumulatif sebesar 5,04%; lebih tinggi dari pertumbuhan ekonomi (PDB) pada periodi yang sama sebesar 4,79%. Pada periode Januari-Desember 2015, nilai ekspor produk industri pengolahan nonmigas mencapai USD 106,63 Milyar, dan nilai impor mencapai USD 108,95 milyar, sehingga neraca perdagangan industri pengolahan nonmigas pada periode yang sama sebesar USD 2,32 milyar (nerasa defisit).

Usaha pemerintah untuk memperkecil defisit di atas, salah satunya dengan cara memberdayakan Industri Kecil dan Menengah (IKM) yang merupakan bagian penting dalam perkembangan industri nasional. Sampai saat ini, Insutri Kecil dan Menengah
terhadap 34,82% telah berkontribusi sebesar pengolahan industri nonmigas secara keseluruhan. Angka ini dapat tercapai karena dukungan lebih kurang 3,6 juta unit usaha, yang merupakan 90 persen dari total unit usaha insutri nasional. Jumlah unit usaha tersebut telah mampu menyerap tenaga kerja sebesar 8,7 juta orang, yang tentunya berdampak pada meningkatnya ekonomi nasional serta mengurangi kemiskinan.

Industri Kecil dan Menengah (IKM) memiliki peran yang strategis dalam perekonomian nasional. Hal ini sejalan dengan Visi Pemerintah dalam Rencana Pembangunan Nasional Jangka Menengah (RPJMN) 2015-2019 yaitu “Terwujudnya Indonesia yang berdaulat, mandiri, dan berkepribadian berlandaskan gotong royong”.

Untuk lebih meningkatkan peran tersebut, Penumbuhan dan Pengembangan Industri Kecil dan Menengah diarahkan untuk memiliki tujuan jangka menengah guna mewujudkan industri kecil dan industri menengah yang berdaya saing, berperan signifikan dalam penguatan struktur industri nasional, pengentasan kemiskinan dan perluasan kesempatan kerja, serta menghasilkan barang dan/atau jasa Industri untuk keperluan ekspor.

**Hadirin dan Saudara-saudara sekalian,**

Awal tahun ini, kita telah memasuki era Masyarakat Ekonomi ASEAN (MEA). Dengan demikian, perekonomian nasional akan langsung bersaing dengan para pelaku pasar di kawasan ASEAN. Produk dan jasa termasuk investasi negara-negara anggota negara ASEAN.

Dalam rangka menghadapi hal tersebut, Pemerintah mengambil langkah-langkah strategis berupa peningkatan daya saing industri dan mendorong investasi di sektor industri; di mana peningkatan daya saing industri itu sendiri dilakukan melalui penguatan struktur industri dengan melengkapi struktur industri yang masih kosong serta menyiapkan strategi ofensif dan defensif dalam akses pasar.

Pemerintah telah melakukan Penguatan Sektor IKM dengan strategi ofensif dan defensifnya melalui beberapa program pelaksanaan, diantaranya antara lain: Penumbuhan Wirausaha Baru; Pengembangan IKM melalui Pengembangan Produk IKM serta Peningkatan Kemampuan Sentra dan UPT; Pemberian Bantuan Mesin dan Peralatan Produksi; Perluasan Akses Pasar melalui Promosi dan Pameran; Fasilitasi Pendaftaran Hak Kekayaan Intelektual; Fasilitasi Sertifikasi Mutu Produk dan Kemasan; serta Fasilitasi Pembiayaan melalui Skema Kredit Usaha Rakyat (KUR).

Saya berharap agar berbagai program-program pemerintah tersebut dapat didukung secara sinergis oleh seluruh komponen masyarakat. Untuk itu, Saya berpesan kepada Saudara-saudara sekalian agar semua program pemerintah dalam bidang
Industri, khususnya dalam program pemberdayaan Industri Kecil dan Menengah, didukung dengan sepenuh hati, agar dapat lebih bermanfaat bagi masyarakat dalam rangka pengembangan industri kecil menengah.

Hadirin dan Saudara-saudara sekalian yang Saya hormati,


Sekian dan terima kasih.

Wassalamu’alaikum Wr. Wb.

Yogyakarta, 14 Mei 2016

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STRENGTHENING THE ECONOMIC OF FOREST FRINGES
COMMUNITY THROUGH MODEL FOR ENHANCING LOCAL
CATTLE COMPETITIVENESS

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ABSTRACT
Local cattle competitiveness of forest fringe community was generally low, so that caused weaknesses of community economic. Effort for enhancing local cattle competitiveness will strengthen community economic through improving husbandry technology, structure of market and industry and condition of local cattle demand. Long purpose of this research was creating strong economics for fringes forest community. Special purpose in second year was implementing model for enhancing local cattle competitiveness at some district at East Java such as Sumenep, Tuban, Bojonegoro, Malang and Blitar. Method which were used were PRA, FGD, RRA, indept interview and survey. Achievement of model was measured by comparative and competitive advantage analysis (DRCR and PCR). There were 4,729,298 cattle at East Java in 2015, 27% of them were local cattle (Madura, Ongole, PO, Brahman, Bali). The biggest cattle producer at East Java were District of Sumenep, Tuban, Malang, Bojonegoro and Blitar. Comparative and competitive advantage of imported cattle was high which were showed by DRCR 0.4396 and PCR 0.4262. Whereas competitive advantage of local cattle was high, showed by PCR 0.3677, but comparative advantage was moderate, showed by DRCR 0.5134. Average profit by raising 2 – 3 imported cattle was Rp 1,490,140/cattle/month, while local cattle was Rp 1,454,000/cattle/month. Imported cattle husbandry contribution on family income was 37.48%, while local cattle was 33.91%. Actually, local cattle husbandry relaStively need fewer capital, price of beef was more expensive and more popular to consumer because of less fat content. Six infrastructure of agribusiness which were needed for enhancing local cattle competitiveness were human resources, technology, capital, raw material, machines and market.

Keywords: local cattle competitiveness, comparative advantage, competitive advantage

INTRODUCTION
Local cattle as one of national commodity have potency of competitiveness, could be improved through profitability and its market. Causal factors of competitiveness consist of technology, productivity, input and cost, industry structure and demand condition (Rahman etc., 2007). Enhancing local cattle competitiveness would strengthening community economic at a national case through improving husbandry technology (include increasing of productivity, quality, input and cost), management of market and industry structure and local cattle demand condition.
Main central of cattle production (including local cattle) at Java contribute 45% to national beef production increased for chasing Indonesian consumption need of beef about 4.5 kg/capita/year (Safitri, 2012). Based on that fact, the chosen focus in this research was on main strategy frame of MP3EI, that was strenghtening local cattle competitiveness of fringes forest community by involving some relevant institutions (university, research institute, Perhutani, husbandry department of husbandry, forestry, industry and trade, NGO etc). It’s related to social forestry, that had been became national commitment and Indonesian government political will (July 2nd 2003) and UU No. 41, 1999 about forestry, that forestry development should be directed to potency of forest resourches, based on community empowerment, give priority
Abdul Azis and Damasus Riyanto

(Mersyah, 2005). Potency of local cattle production and its competitiveness still could be.

Previous research by Herlambang etc. (2007-2008) and Herlambang etc. (2011-2012) showed that quality and productivity of local cattle was generally low, the causes were: (a) local cattle was just side business, so good husbandry technology was ignore; (b) feed technology was low; (c) market structure and commercial regulation of local cattle were weak; (d) quality control from every phase of production until processing were weak. Those caused economic of local cattle rancher at forest fringe was weak too and threatened the effort of forest conservation, because pushed their desire to exploit forest.

Long general purpose of this research was creating strong economic of forest fringe community, all at once keeping sustainable forest rehabilitation. Special purpose in 1st year was formulated model of enhancing local cattle competitiveness as an effort for strengthening economic of forest fringe community (had achieved). Special purpose in 2nd year was: implementing reliability of model and improving it at wider area at East Java (District of Sumenep, Tuban, Bojonegoro, Malang, Blitar) and South Sulawesi (Priyanto, 2011). This research used stratified random sampling, because forest fringes community consist of heterogenous group. Stage of respondent choosing was: (1) stratificationing population, that was classificationing population to homogenous group based on their job and economic activity; (2) from every stratification was chosen 70 respondents and because there were four sub district, so we had 280 respondents.

Location of research in 1st year was determined purposive at District of Sumenep, in second year at some districts at east Java such as: Sumenep, Tuban, Bojonegoro, Malang, Blitar (BPJP Jawa Timur, 2011), and in third year was planned at some provinces of Indonesia such as: Central Java, West Java, West Sumatra, Nanggroe Aceh Darussalam, and South Sulawesi (Priyanto, 2011).

METHOD

This research used participative approach. At the first year (had done), participative approach (qualitive) was grounded for getting good understanding to know interesting case as a support for making research outcome that was model of enhancing local cattle competitiveness for strengthening economic of forest fringe community. At second year we used consciousness raising, improving knowledge and skills from community development approach through social learning to deliver information, training and advocacy. This research was applied research, so from first until third year used PRA to competitive local product and pay attention to excellent competitiveness technology. Together responden and be a part of them.

According to the purpose which had orientation on attitude pattern changing of community, it must be need time. Planned stages of process had done from consciousness raising, information delivering of education subject, training and coaching until monitoring and evaluation. Research about this subject was planned for 3 years. First year had done in 2014, second year from January 1st until December 15th 2015.

Data was analyzed by quantitative and qualitative analysis. Quantitative analysis related to local cattle competitiveness using DRCR (Domestic Resources Cost Ratio) and...
Participatory Rural Appraisal method with "equal personationing and together doing" principles between researcher and responden, in accordance with living:

1. DRCR and PCR < 0.25 competitiveness was very high and very efficient.
2. DRCR and PCR 0.25 – 0.50 competitiveness was high and efficient.
3. DRCR and PCR 0.51 – 0.75 competitiveness was middle and efficiency was not enough.
4. DRCR and PCR 0.76 – 1.00 competitiveness was low and was not efficient.

RESULT AND DISCUSSION

Sum Of Cattle at Research Field

Table 1. Sum of Cattle at Research Field

<table>
<thead>
<tr>
<th>No.</th>
<th>District</th>
<th>Sum of Cattle (heads)</th>
<th>Sum of Local Cattle (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sumenep</td>
<td>402,532</td>
<td>98</td>
</tr>
<tr>
<td>2.</td>
<td>Tuban</td>
<td>351,769</td>
<td>56</td>
</tr>
<tr>
<td>3.</td>
<td>Malang</td>
<td>199,431</td>
<td>42</td>
</tr>
<tr>
<td>4.</td>
<td>Bojonegoro</td>
<td>160,137</td>
<td>37</td>
</tr>
<tr>
<td>5.</td>
<td>Blitar</td>
<td>137,943</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>East Java</td>
<td>4,727,298</td>
<td>27</td>
</tr>
</tbody>
</table>

Sources: Tempo (2015)

Population of cattle at East Java reach 4,727,298 heads, from that amount 5 district which had the biggest population were Sumenep, Tuban, Malang, Bojonegoro and Blitar.

Implementation of Local Cattle Competitiveness Model at Research Field

Competitiveness shows advantage of a commodity, both comparatively and competitively. Competitive advantage shows efficiency of using domestic production factor to give value added to product at domestic market which is measured by PCR (Private Cost Ratio), otherwise comparative advantage measures efficiency of using domestic production factor to make additional devisa which is PCR (Private Cost Ratio) for measuring comparative and competitive advantage (Agustian, 2007).

Assigning of competitiveness: subsidy, protection, import duty, tax and many other policies.

DRCR is economic analysis, consider whole economic aspects without government interfere/policy. Economic analysis give attention to total output, productivity or provit from all used resources in a project for community or economic activity, without seeing who provide the resources and who will accept the outcome from the project are. The outcome were the social return or the economic returns from activity, so it uses social price or shadow price. Social price for DRCR in this case was determined as follow:

1. Tradeable Input:
   a. Feed

Feed for cattle consist of grass, additional feed such as by-product of rice milling, "gamblong", cutting straw, sugar, sea salt, Java molasses, EM4, Bioplus etc. Some of feed was imported, so shadow price was counted by CIF price.

b. Medicines

Medicines at ranches in this research was not found as exported and imported commodity, so shadow price was determined equal with private price.

2. Untradeable Input
   a. Labor in this research was from community around the ranches, which were jobless when there no ranches, so it was assumed that production foregone was equal with null, beside it was assumed no transportation cost too for labor. Furthermore shadow wage was equal with financial wage of local labor.

b. Interest

Shadow price of average private saving interest rate was July 20014 – July 2015 = 12.16% plus average inflation rate in same period that was 5.03 % (www.bi.go.id, 2015). Based on
measured by DRCR (*Domestic Resources Cost Ratio*).

CR is financial analysis based on private price, that is harga real price which is accepted or payed by husbandry. The price have been influenced by goverment such as this research was equal with production forgone, that was the highest price of opportunity product if there was no ranches. At research field, ranches was found at PHBM forest area with cheap private price for rent, so shadow price was determined equal with ordinary price of rent, that was Rp 3,000,000 /ha/year.

3. Output
Output was cattle and cattle was exported commodity, so shadow price was equal with border price FOB (Free on Board).

4. Exchange rate shadow price of exchange rate of rupiah on dollar. To know PCR and DRCR (Table 3).

**Tabel 3. Policy Analysis Matrix per hektar Local Cattle Farm at research Field in 2015 (rupiah)**

<table>
<thead>
<tr>
<th>Kind of Cattle</th>
<th>Details</th>
<th>Revenue tradeable</th>
<th>Input tradeable</th>
<th>Input untradeable</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Cattle</td>
<td>Private Price</td>
<td>16,381,685</td>
<td>758,719</td>
<td>6,657,594</td>
<td>8,965,371</td>
</tr>
<tr>
<td></td>
<td>Social Price</td>
<td>18,762,343</td>
<td>1,150,257</td>
<td>7,744,561</td>
<td>9,867,524</td>
</tr>
<tr>
<td></td>
<td>Divergence</td>
<td>(2,380,658)</td>
<td>(391,538)</td>
<td>(1,086,967)</td>
<td>(902,153)</td>
</tr>
<tr>
<td>Imported Cattle</td>
<td>Private Price</td>
<td>29,735,333</td>
<td>1,646,319</td>
<td>10,335,043</td>
<td>17,753,970</td>
</tr>
<tr>
<td></td>
<td>Social Price</td>
<td>25,725,649</td>
<td>2,312,430</td>
<td>12,022,988</td>
<td>11,390,230</td>
</tr>
<tr>
<td></td>
<td>Divergence</td>
<td>(4,009,686)</td>
<td>(681,221)</td>
<td>(1,687,945)</td>
<td>(6,378,850)</td>
</tr>
</tbody>
</table>

Source: Processed Primary Data (2015)

**Table 4. PCR and DRCR Local Cattle at Research Field**

<table>
<thead>
<tr>
<th>Kind of Cattle</th>
<th>PCR (comparative)</th>
<th>DRCR (competitive)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Competitiveness criterion</td>
</tr>
<tr>
<td>Imported cattle</td>
<td>0.4262</td>
<td>High</td>
</tr>
<tr>
<td>Local cattle</td>
<td>0.3677</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Analized primary data (2015)

**Table 5. Structur of Family Income of Cattle Husbandry per head at Research Field**

<table>
<thead>
<tr>
<th>Details</th>
<th>Satuan</th>
<th>Imported Cattle*</th>
<th>Local Cattle*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average raised cattle</td>
<td>heads</td>
<td>2 – 3</td>
<td>2 – 3</td>
</tr>
<tr>
<td>Husbandry Profit /head/year</td>
<td>Rp/ head/year</td>
<td>16,604,904</td>
<td>14,400,000</td>
</tr>
<tr>
<td>Husbandry Profit /head /month</td>
<td>Rp/ head /month</td>
<td>893,600</td>
<td>746,000</td>
</tr>
<tr>
<td>Total other income /month</td>
<td>Rp/ month</td>
<td>1,490,140</td>
<td>1,454,000</td>
</tr>
<tr>
<td>Other income + cattle /month</td>
<td>Rp/ month</td>
<td>2,383,740</td>
<td>2,200,000</td>
</tr>
<tr>
<td>Contribution of cattle usbandry</td>
<td>%</td>
<td>37.48</td>
<td>33.91</td>
</tr>
</tbody>
</table>

Source: Processed Primary Data (2015)

Information: *) average of 5 district (Sumenep, Tuban, Bojonegoro, Malang and Blitar)
b. Comparative Competitiveness

Comparative Competitiveness which was showed by DRCR, imported cattle was on high category (DRCR = 0.4396), whereas local cattle was on high enough category (DRCR = 0.5134). Eventhough that fact, local cattle husbandry relatively need fewer capital, price of beef was more expensive and more popular to consumer because of less fat content. Based on the result, local cattle still have good potency to improve in order to supply beef for nation, all at District of Sumenep, Tuban, Bojonegoro, Malang and Blitar. Beside competitiveness, enhancing economic of local cattle husbandry must be getting over with increasing of income, because good income make farmer could fulfill many needs and make better life for their family.

Profit of Local Cattle Husbandry at East Java

Structure of family income of cattle husbandry at research field (District of Sumenep, Tuban, Bojonegoro, Malang dan Kabupaten Blitar) showed as followed Table 5.

Table 5 showed that average profit by raising 2 – 3 keads of imported cattle was Rp 1,490,140/ head /month, whereas local cattle was Rp 1,454,000/ head /month, it was not too different. It becaused imported cattle need much more cost than local cattle.

Contribution of imported cattle usbandry on family income was 37.48 %, bigger than local cattle that is 33.91 %. It becaused raising imported cattle well had potency to get big profit.

Model for Enhancing Local Cattle Competitiveness as an Effort to Strengthen Economic Of Forest Finger Community

Model for enhancing competitiveness Model was arranged to achieve two purposes, there were: (1) increasing profit and competitiveness criterion from high enough and high to very trough increasing productivity and were known as 6 M, there were: improving quality. Increasing productivity could be get by improving cultivation technology, whereas improving quality could be get by improving post harvest treatment technology. Generally, technology (methode) was one of six weaknesses which were exist on local cattle agribusiness, so improving technology must be supported and balanced by improving the the other weaknesses.

Cattle agribusiness consist of 5 sub system, that were provisioning production factor (such as germ, feed and medicines), cultivation, harvesting and processing, marketing and supporting sub system for improving performance of four others sub system. Supporting sub system consist of some other things, such as infrastructure, governement institution, research and information institute, Non Goverment Organization (NGO), Bank, investor, and stake holder.

Main object of model of enhancing local cattle competitiveness was an effort for overcome any weaknesses on cattle agribusiness by involving related supporting sub system. Agribussines sub system in this model started with farm (husbandry) which was influenced by internal and external factors. Internal factors reated with pasturage and other production factors. Pasturage for local cattle was getting narrower and narrower. The other production factors faced not enough available, such as : decreasing quality of natural resources, quality of husbandry human resources, and limited capital for buying excellent germ. External factors were price of cattle, imported cattle, and environment problem/ ecology. Better quality of imported cattle could be competitor to local cattle which could influenced its price. Low price of local cattle would decrease husbadry interest for running their fram well. Environment problem and ecology which not supporting enough for growing and developing cattle could threatened existence of local cattle. Six infrasructure on cattle husbandry that
methode, money(capital), men/human resource, material, machines, and market.

a. Human Resource

In every effort, human act as manager and labor, include on local cattle agribussiness. Human, in this case farmer, were expected could implement technology and managing capital well, so that could run bussiness and get high yield and profit.

Effort for increasing quality and improving husbandry ability was absolutely need for increasing local cattle performance. Improving husbandry ability could be done by somehow and someway. As an example, giving information by field instructor and some expert who care to husbandry had done. Unfortunately just 54% - 62.5 % farmer participated it. Because of that many models of improving husbandry ability were very need for provisioning them any kind of skills, both technically and managerial, so that performance of local cattle increase.

Beside technically and managerial, some other things were needed, that were changing of mind and attitude to run farm. Mind of farmer should be consciousied about many things, such as not be tempted easily future sales system, how important cooperation among farmer by being group of farmer member was, increasing efficiency and productivity and avoiding damaged loan system etc were. Without good mind, farmers would not had good attitude on their farm, so technology and capital could not be used optimally.

b. Methode (technology)

Technology, capital and able human were needed at farm level to handle production process and post harvest treatment, for increasing efficiency and productivity. Research showed that average productivity of local cattle husbandry was still low, so that technology which was needed at farm level was using of feed fermentation methode for over came very cheap or having day loan to loaner with high interest. So, it was needed any need to be improved unsave feed on dry season. Biological feed suplement was usefull for (1) improving digestion system of cattle, (2) increasing milk production of cattle (3) raising weight of cattle quickly and naturally, fat, and healthy (4) increasing appetite of cattle (5) beef more featy but low fat/cholesterol, (6) cattle was more immune and (7) feces of cattle was not stink so not soiled environment air (8) fewer feces and urine sapi lebih sedikit (9) feces and urine could be used as fertilizer and natural biogas unsave feed on dry season.

Biological feed suplement was usefull for (1) improving digestion system of cattle, (2) increasing milk production of cattle (3) raising weight of cattle quickly and naturally, fat, and healthy (4) increasing appetite of cattle (5) beef more featy but low fat/cholesterol, (6) cattle was more immune and (7) feces of cattle was not stink so not soiled environment air (8) fewer feces and urine sapi lebih sedikit (9) feces and urine could be used as fertilizer and natural biogas.

d. Money

Capital was needed as working capital or investation. Otherwise was not absolutely, capital was needed to buy better technology for local cattle agribussiness. Working capital which was needed for local beef cattle at District of Sumenep based on result of research was Rp 746,000/head/month whereas the other kind of cattle was 893,000/ head/month.

According to analysis result of profit land its contribution on family income, local beef cattle had not been fulfil the whole need of the family yet, so it can be understood tha the farmer often getting hard to obtain working capital. Because of that, cooperation with bank was needed, so there was an opportunity to obtain working capital easily.

Aniway, cooperation with bank was not easy to be done by farmers personally because they just had a few garantie. Some recessive farmer had to
institution which was could be trust as a guarantor by finances institution. Post harvest treatment and processing of local cattle need a lot of investation for land, building, machines and operational cost. Without supporting sub system, farmer or even group of farmer hard to have processing unit because of restrictiveness of capital.

c. Material

Quantity, quality and continuity of material were very important on local cattle cultivation. Less quantity would disturb fluence of production process, whereas over quantity would be not handled well. Quality would influence standard quality of final product, whereas continuity would keep processing run well and supported production target achievement. Production target, both quantity and quality, was important to reach, especially when it had been arranged by buyer. When farmer could not statisfied buyers, competitor would take the position. Competitor of local cattle were imported cattle and big farmer.

Availability of local cattle feed material could be a problem for farmers and their fram. Availability of feed material at dry season was one of many caused that farmer could not take care of local cattle farm, both by themself or group of farmer, although had been known that local cattle farm could give bigger profit than imported beef cattle.

e. Machines/tools

Machines was a kind of technology which was needed for making any job easier also increasing efficiency and productivity. There were still needed many machines and tools for supporting local cattle agribussines. Well known machines among farmers was feed processor.

f. Market

Market was final target every bussiness, including agribussiness, and main interest to farmer. Open market and high price would rise passion of farmer to pick out any bussiness or comodity, contrary condition would loose passion. Competitiveness, its profit and contribution on family income. sell their product through ijon system which was.

Even, when market of cattle was not running well, some farmer would change their husbandry with other profitable bussiness.

Attitude of beef cattle market at farmer level was perfect competition market, which there were many buyer and many farmer as seller. At this market price maker was agreement between buyer and seller.

Structure of beef cattle market at farmer level was very simple, from farmer straight to middle trader (100%), whereas dairy cattle straight to cooperative entreprise (50%). By ignoring weaknessess of monopsonic market attitude, simple structure of market caused market efficiency at farmer level was high.

Market Efficiency was a marketing cost and product value ratio, it was one of marketing performance measure. The lower its value, the higher marketing efficiency, the higher market performance. Based on market efficiency, market performance of local cattle could be categorized high enough because average marketing cost was very fewl. Most of farmer sell their product to middle trader straight on farm. Whereas milk from dairy cattle sell to the cooperative entreprise as long as they could produce standardized product.

Otherwise market of cattle at farmer level looked simple and current, but marketing net work still need guidence, specially imported cattle, so that farmer was not left out up date information on import market and could fulfil consumer needs.

Different condition was happen at market of imported cattle, attitude of market was competitive market. There were many seller and many buyer, but farmer, group of farmer or any producer had freedom to make price, even so market receive imported beef cattle easier because competition was hard with flexible price. Competition also happened because many kind of imported cattle had been went into
Furthermore, competitiveness, profit and contribution on family income will be a follow-up and evaluation substance to see which part that still need to further lead and which part need to keep up end.

CONCLUSION

Population of cattle at East Java reach 4,727,298 heads, 27% of them were local cattle (named as Madura, Ongole, PO, Brahman, Bali). Serially, the biggest producer of cattle at East Java were District of Sumenep, Tuban, Malang, Bojonegoro and Blitar.

Competitive and comparative advantage imported cattle was high, which was showed by , PCR = 0.4262 and DRCR = 0.4396. Local cattle had competitive advantage at high category (PCR = 0.3677) but comparative advantage had high enough category (DRCR = 0.5134).

Average profit by raising 2 – 3 keads of imported cattle was Rp 1,490,140/ head /month, whereas local cattle was Rp 1,454,000/ head /month. Contribution of imported cattle husbandry on family income was 37.48 %, bigger than local cattle that was 33.91 %. Even though that fact, raising local cattle needed fewer capital, price of beef was more expensive and beef was more prefered by consumer because of less fat content.

There were six infrastructure of agribusiness for enhancing local cattle competitiveness, that were human resource, technology, capital, raw material and market.

ACKNOWLEDGEMENTS

Our thanks goes to Ditlitabmas Kemenristekdikti (Research and Community Services, Directorat General of Higher Education, Ministry of Research and Higher Education), which had funded this research.

Indonesia and received easily by consumer.

Six infrastructure of agribusiness should be lead for enhancing local cattle

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ATTACHMENT

**LOCAL CATTLE AGRIBUSSINESS**

**MATERIAL Supply**

**MACHINES**

**PROCESSING**

Post harvest treatment Downstream industry

**MARKETING**

**MARKET**

**ENHANCING OF LOCAL CATTLE**

**Figure Model of Enhancing Local Cattle Competitiveness**

Keterangan:

- Sub system of agribussnes
- Flow of process
- Flow of follow up

**Comparative Advantage was approached by social provitability**

**Could Increase:**
1. Profit of husbandry
2. Contribution on family income

**INTERNAL**
- land
- production factors

**EXTERNAL**
- price of cattle
- imported cattle
- ecology

**Agribussiness of local cattle institution**
1. Husbandry instructor
2. Group of farmer
3. Informal leader of religion or community

**Infrastucture of local cattle agribussiness**

**Lead by Related Institution (Department of Husbandry)**

**Quantity, quality and continuity**

**Lead by University**

1. Infrastructure
2. Industry and Trade Department
3. Lead by Cooperation

1. Association of Local Cattle Husbandry
2. Association of Indonesian Cattle Exporter

**INTERNAL**
- Strukture of market
- Market Performance
- Market attitude

**EXTERNAL**
- imported cattle

**HR**

**CAPITAL**

**TECHNOLOGY**

**BANK**

**MATERIAL Supply**

**Flow of process**

**Flow of follow up**

**Local Cattle competitiveness**
**DISCUSSION FROM PARALLEL SESSION**

<table>
<thead>
<tr>
<th>PAPER TITLE</th>
<th>Strengthening The Economic of Forest Fringes Community Through Model for Enhancing Local Cattle Competitiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>AUTHOR</td>
<td>Teguh Hari Santosa, Toni Herlambang, Nurul Qomariah, and Oktarina</td>
</tr>
</tbody>
</table>

**DISCUSSION**

**QUESTION**
1. How about the detail of technology six infrastructure?
2. How can you measure the shadow price for DRC Ratio?

**ANSWER**
1. Human resource still weak, the education still low, and they have no money so they can’t accept the new technology.

**SUGGESTION**
1. Check the writing