ISBN 978-602-7577-70-1

Agribusiness Development for Human Welfare

2016

"Small and Medium-sized Enterprises Competitiveness"

PROCEEDING

INTERNATIONAL CONFERENCE

Agribusiness Development for Human Welfare

UMY

Universitas Muhammadiyah Yogyakarta

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Organized by:

Department of Agribusiness, Faculty of Agriculture

Universitas Muhammadiyah Yogyakarta

Supported by:

PROCEEDING INTERNATIONAL CONFERENCE

AGRIBUSINESS DEVELOPMENT FOR HUMAN WELFARE

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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.

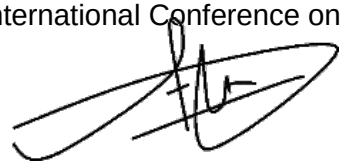
Especially, we are grateful to invited speakers, Prof. Zainal Abidin Mohamed and Asist. Prof. Pornthipa Ongkunaruk, for their willingness to share information and thoughts in this conference. As a bit report, that this conference has been attended by 85 speakers coming from five countries.

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 commitee, 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.

Gubernur

Daerah Istimewa Yogyakarta

Sambutan
KONFERENSI INTERNASIONAL
"*AGRIBUSINESS DEVELOPMENT FOR HUMAN WELFARE*"
Yogyakarta, 14 Mei 2016

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 periode 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 insdustri 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

telah berkontribusi sebesar 34,82% terhadap pertumbuhan industri pengolahan 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 demikan, perekonomian nasional akan langsung bersaing dengan para pelaku pasar di kawasan ASEAN. Produk dan jasa termasuk investasi negara-negara anggota telas bebas memasuki pasar di kawasan 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,

Demikian beberapa hal yang dapat Saya sampaikan. Akhirnya dengan memohon ridho Allah Subhanahu Wata'ala, seraya mengucap "*Bismilahirrahmanirrahim*", **Konferensi Internasional "*Agribusiness Development For Human Welfare*"** dengan ini secara resmi Saya nyatakan dibuka. Semoga Allah SWT memberikan petunjuk, bimbingan, perlindungan dan kemudahan dalam setiap langkah dan upaya kita. Amien.

Sekian dan terima kasih.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 14 Mei 2016
GUBERNUR
DAERAH ISTIMEWA YOGYAKARTA

HAMENGKU BUWONO X

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THE INSTITUTIONAL ROLE IN DISSEMINATING SITE-SPECIFIC AGRICULTURAL INNOVATION IN ACEH

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ABSTRACT

Agricultural institutions have a crucial role in disseminating site-specific tecnology in term of supporting the development of Aceh province. This study which was conducted in March to November 2011 in the districts of Pidie, Bireuen and Pidie Jaya aimed to determine which formal and informal institutions had the largest contribution in site-specific technology dissemination. Besides, it was also to find out the model of institutional dissemination system of the existing agricultural innovation as well as soliciting feedbacks from the users. The selection of research location and the samples was conducted through purposive sampling (intentionally). From each district, three subdistricts were taken, and from each subdistrict three villages were selected. Each village comprised 20 samples, so the total respondents involved were 540 people. The result obtained from this study was the formal institutions in Pidie Jaya provided a more dominant and significant contribution in disseminating site-specific technology innovation through a range of networks such as Aceh AIAT, Extension Agency, Agricultural Training Agency, and farmer groups. The performance of these formal institutions in Pidie Jaya was very influential on the development of site-specific agricultural innovation while the performance of formal institutions in Pidie and Bireuen was diverse. Therefore, in the future, the role of extension workers in the field is expected to be more synergistic in disseminating technology innovation.

Keywords: formal institutions, informal institutions, innovative, site-specific, feedback

INTRODUCTION

Institution is essentially defined as “a container” or “a form of organization”. The roles of an institution should be comprehended well so that its function will be in line with the purpose of its establishment. Nowadays, Indonesia is facing economic disparity in the form of slow growth in the national, regional, and local leading commodities. The inaction occurs not only in the increase of quantity but also in the improvement of the quality and the continuity. In fact, these three things are the key factors in the global market competition. Consequently, Indonesia often becomes an easy target for developed countries and developing countries such as Vietnam and Cambodia since Indonesia is still unable to meet the national needs as well as to compete in the global market (Moehar Daniel, 2015).

The official roles of Indonesian Agency for Agricultural Research and Development (IAARD) in the national agricultural innovation system are: (1) to create improved and strategic agricultural innovations, (2) to adapt agricultural innovation to be more effective for specific users and specific locations, and (3) to inform and provide basic materials innovation/technology for the users. However, disseminating the technology innovations through a set of extension activities, advocacy, and facilitation is not included in the list of IAARD’s main duties (Simatupang 2004). Therefore, to assist IAARD, Aceh Assessment Institute for Agricultural Technology (Aceh AIAT) was

established in 2001 to develope and disseminate the appropriate technologies that suit the characteristics of the specific area.

A number of specific technology innovations generated by Aceh AIAT still requires more attempts to be disseminated through various methods of commu-nication, tthe networks of Aceh AIAT, the Executing Extension Agency, the Agricultural Extension Center and farmer groups.

Formal institutions are emphasized on the institutional formation of the government with the national standardized top-down pattern. This is line with the statement of Suradisastra (2006) that the patterns of communication and the transfer of technology in formal institutions should be vertical unilateral and instructive.

Primarily, formal institutions are the official governmental institutions which are ratified by the legal decree and established to support any governmental program. On the other hand, informal institutions are formed naturally in the society due to the unsolved issues that cannot be handled individually. As a result, a group of people agrees to create an informal institution to find the solutions of the problems (Pakpahan, 1989)

The existence of informal institutions will usually survive in the community as long as its role is perceived important to solve the specific issues in the society. However, its institutional form and values may change due to the external interference from government or other organizations through certain regulations or legislation. In most cases, these informal institutions may also change to formal institutions (Gunawan *et al*. 1989 in Agus *et al*., 1996).

Koestiono and Purnomo (2008) stated that an institution is a unit with complex values and structures to improve agricultural businesses. The process of its development is basically a part of societal education that should be learned together (Ponniah, 2008).

Meanwhile, technology development consists of a series of follow-up activities which are carried out at an agribusiness scale through the study of social, economic, cultural and local institutions and resulted in the development of models and technology packages.

The dissemination of technology should be conducted through official goverment's institutions. It can be done through the researchers/reviewers, the agricultural extension officers, or the officials from Department of Agriculture/ Ministry of Agriculture (Sumarno, 2008; Bachrein and Widodo, 2006).

In contrast, informal institution are run by independent smallholders, indi-genous organizations, and private organizations which promote agricultural technology innovation.

Institutional Roles

Even though many institutions are engaged in the dissemination of technology, those which have the largest constribution still remain unknown. Similarly, there also no feedbacks from the users to improve the existing agricultural technology.

An institution has a vital role in disseminating the agricultural technology innovation to the users as well as soliciting feedback from them. The Department of Agriculture and the Agricultural Extension Center along with the informal institutions such as "vocational blang" and other traditional institutions in Aceh have actively worked in disseminating agricultural technology innovation to the users.

The dissemination is conducted by using various methods, such as face to face communication, technology demonstration, and the development of agricultural information. It aims to provide job vacancy especially in rural areas as well as increasing national economic growth. In addition, Aceh AIAT still has lack of data concerning on the exact number, forms, or information about informal institutions in the development process of agricultural innovation in the study locations. For these reasons, it is necessary to conduct a study in order to find out which formal and informal institutions contribute the most in

disseminating the technology innovation as well as determining the system model used in disseminating the existing agricultural innovation and gaining feedback from users.

Based on the background of study above, the problems can be formulated as follows:

1. The performance of formal and informal institutions in the development of agricultural innovations is still unoptimal. Hence, it needs a further identification and analysis on the three main institutional pillars: (i) the regulatory side, (ii) the normative side, and (iii) the cultural – cognitive side,
2. There are still no vertical and horizontal relation between formal and informal institutions in the development of agricultural innovation.

From the problem formulation above, it is clear that the objectives of this study are to identify and analyze the potential of infomal institutions in the development of site-specific agricultural innovation, to analyze the performance of formal and informal institutions in developing site-specific technology innovation, and to evaluate the synchronization of formal institutions with informal institution vertically and horizontally in the development of agricultural innovation.

Level of Technological Innovation

The success of technology dissemination is reflected in the application of technology and the dissemination of information, the renewal rate of technology and information used by the users, the range of its spread, the application of technology information among the users, the increase in the users' ability in task implementation, and in the welfare achieved by the users after applying the information of the disseminated technology. Generally, it takes times to reach this success through various mutually supportive dissemination activities (Angkasa, 2003).

Havelock (1971) confirmed that there are some factors which hamper the technology implementation generated by researchers to the users. Partly, it is due to the different rules, values, language, and communication patterns which each institution applies. This statement has also been proven through several observations in the field where extension officers did not receive complete information about the research results from the researchers on an ongoing basis. Similarly, the work of the researchers was also considered ineffective because the research they had conducted had no correlation with the problems faced by the farmers. As a result, both extension officers and researchers did not receive any feedbacks from the users for the next preparation of research programs (Tjitropronoto, 2005). Therefore, an effective communication channel as a media for the researchers, extension officers, and the users is highly required in the process of technology adoption.

The study system of formal and informal institutions in the development of site-specific technology innovation was conducted to determine which formal and informal institutions contribute the most, identify the institutional dissemination model system of the existing agricultural innovation, and solicit feedbacks from the user in Aceh province.

METHOD

Time and Place

The study was conducted in Pidie, Bireuen and Pidie Jaya districts since these regions were the locations in which the assessment and dissemination of site-specific agricultural technologies were applied. The assessment itself was carried out from March to November 2011.

Population and Sample

The population and institutional samples as respondents in this study were taken from formal and informal institutional in the districts, subdistricts, and villages where the technology was

developed. The respondents of formal institutions at the district level were the Agricultural Department, the Executing Extension Agency, and business operators. Formal institutions selected at the district level were the Agricultural Extension Center, Field Agricultural Extension, Farmer Groups, and business operators. Meanwhile, the respondents of informal institutions were those existing in the respective regions, districts and sub-districts.

The population of this study consisted of farmers from the three districts mentioned earlier. The study location and samples were selected by using purposive sampling (intentionally). Three sub-districts were chosen from each district, and three villages were taken from each sub-district. Twenty samples were chosen from each village, so the total respondents in this study were 540 respondents.

Data Analysis

Data was collected in the form of primary data and secondary data. The collection of primary data was conducted through a well-structured observation and interviews with a number of key informants and the implementation of Forum Group Discussion (FGD) to fortify the required information. Meanwhile, the secondary data collection was done through the report analysis of relevant parties to complete the previous primary data which finally would be tabulated.

Data was analyzed qualitatively with descriptive explanations by using mass approach method, group approach method and personal approach method. To solicit feedback and institutional transfer system model of the existing agricultural innovation, some surveys were carried out as well.

RESULT AND DISCUSSION

Socioeconomic Characteristics of the Respondents

From the result of the study, Pidie Jaya and Bireuen did not show any striking difference in age. The average age of farmers was 44 to 40 years old. The youngest respondent was 19 years old while the oldest one was 65 years old.

Based on the data collected, 11.5% of respondents was under 30 years old , while 36% was 31-40 years, 33.4% was 41-50 years old, 14% was 51-60 years old and 5% was above 60 years old. Viewed from the percentages, there is a positive correlation between the age of farmers with the experience in the field where younger farmers were more receptive to new innovations than older ones. However, the younger ones were still inexperienced than the older ones who were more experienced and preferred seeing real manifestation of the technology innovation in the field.

In the aspect of formal education, 50% of respondents were Junior High School's graduates, while 17.5% finished only primary school, 4.5% completed Senior High School, and 8% did not have any formal education.

The level of formal education generally reflects an individual's mindset, skills, attitudes, decision-making, and decision development. Similarly, it influences the willingness in receiving and understanding technology information. It is found that respondents with the same level of education have similar level of understanding.

Not only did the farmers of Pidie and Pidie Jaya have experience in rice farming, they also had at least one-year experience in soybean farming. All of them worked on their own land of 0.85 ha with plenty varieties comprised improved varieties, hybrid varieties, and non-hybrid varieties. The seed used was taken from Aceh AIAT and the local Agricultural Department as the seed providers and purchased by the farmers themselves.

Even though these activities were performed in an Integrated Crop Management Field School (ICM-FS), only some farmers had a good understanding about this technology while the others just followed the instructions of the extension officers or the chairman of their farmer groups without knowing why they should do such instructions. Generally, those who applied the recommended

technology by the extension officers were those who had actively been involved in the every activity held by Agricultural Departments or related agencies while those who did not had not been aware of it before. This was mostly due to the lack of information received by the farmers as they had no means of transportation to reach the extension area to follow the extension activities.

Inadequate number of extension officers may also lead to ineffective extension system. Hence, the recruitment of Freelance Workers and Assistant Extension Workers (FW-AEW) from various disciplines can be the solution to increase the number of extension officers. Nevertheless, FW-AEW often comes from various levels of formal education with varied ages; therefore, the majority of FW-AEW still have lack of experience in the field.

The lack of farmers' ability in applying new technology is often due to the ineffective extension system. The ideal number of extension officers in the field is 222 who may come from civil servants, FW-AEW, etc.

For the effectiveness of extension system, it is necessary to provide adequate facilities and infrastructure such as the operational vehicles for extension program and tools as media for education in the form of electronic appliances, leaflets, brochures and a library. It is also important to provide tools for water content measurement (moisture tester), pH measuremen, tile tools, etc.

In addition, media for education in the form of pilot-demonstration area (plots), field school, or field management school for pest control and diseases is considered important as well. The extension officers should also have sufficient knowledge capacity, particularly in the fields of agriculture, animal husbandry, fishery and farming.

The application of the latest technology is essentially meant to increase farmers' production as well as increasing their income. However, the development in the Extension and Food Security in Pidie Jaya still faces several issues such as the limitations of the Human Resources (HR) and poor infrastructures. To overcome the problems, the local government has made a great deal of efforts to generate breakthrough in technology innovation so they can improve the welfare of the farmers, breeders, communities, and business operators engaged in agribusiness sector.

The development of agriculture, fisheries and forestry is targeted to improve the quality of all commodities with an eco-friendly system. To accelerate the target of achievement, the Agency of Extension and Food Security (AEFS) will continually empower and develop the Extension Center of Agriculture, Fisheries and Forestry. To assist the work of extension officers', the goverment has also established 17 agricultural agencies such as Extension Hall of Agriculture, Livestock and Forestry in all over sub-districts despite the incomplete facilities that suit the need of specific locations.

There were several organizations involved in this study, namely (1) Governmental Organization such as The Institute of Agricultural Extension, regency officers, Rural Security Institution, and the head of the village, (2) Indigenous Organizations such as community leaders / role models, keujreun blang, the Association of Water Finder Farmers, mutual assistance and farmer groups, (3) Religious Organizations such as Religious Assembly, Mosque Youth group. 4. Organizational Economics such as savings and loan cooperatives, farmer groups, group of water finders and users, social gathering, and (5) New Social Organizations such as Family Welfare Group, Integrated Community Service, Youth / Youth organizations, sports organizations, and Dasa Wisma.

The membership in social organizations is voluntary. Anyone can easily enroll to become the member of these social organizations and most of whom still live in the same social environment and administration. The recruitment information is usually obtained from family, friends or others while the enrollment itself can be done either orally or written. The rights and

duties of each members are usually formulated in the form of an oral or written agreement by the organization. This written agreement is manifested in the form of Statutes and Bylaws (especially for economic/financial organization). Each member has the rights for education, social gathering, social assistance and paticipation in any activities held by the association while the duties included are attending the regular meeting, paying mandatory dues, giving voluntary contributions, attending routine meeting and actively following the activities held by association.

Nearly in all study locations, the farmers were required to join a farmer group because it would be a media for aid distribution as well as a forum for discussion among its participants and the commissioning program (Human Resources Agency Ministry of Agriculture, 2007; Balitbangtan, 2006). Since the budget allocated for this program was quite large, the members were expected to become solid and cooperative in order to make the program successful.

Farmers groups basically exist to assist the farmers by providing them the capital for the farming activities so that they will be more enthusiastic in increasing their production. The existing farmers groups in the villages have already been well-structured with a chairman and secretary whose responsibility to manage the groups. Any meeting with the members or with the extension officers in their area in term of increasing the knowledge and insight in the field can easily be arranged as well.

In the years of 2010 and 2011 respectively, there had been a lot of agricultural development, especially in rice planting system. Inspite of the inaction, the adoption of the technology had been done well. It is proven by the involvement of all villages in adopting the technology, especially in using VUB seeds.

Furthermore, 99% of farmers had also used high-quality and labeled seeds such as Ciherang, Mekongga, Cibogo, and Inpari. The use of these improved seeds was initiated by the Executing Extension Agency and innovated by Aceh AIAT. In this case, Aceh AIAT played a very significant role in adopting some of the technology in the ICM model, especially legowo planting system which was applied by nearly all districts in this study.

In order to achieve the optimal results as well as increasing the income, farmer groups desire various kinds of programs such as adequate tillage tools program, simultaneous paddy planting programs, seed quality improvement program, effective water management program, capital increase program, media supply program, pest and disease control program, and market program that can accommodate adequate harvest with good price. In the last three years (2008-2009), the most widespread and comprehensive program was the Rural Agribusiness Development Program. Farmers Groups which were formed to provide capital assistance for their members had become a success indicator for RAD.

Most farmers highly expect higher price of grains like they had in 2010 namely as much as Rp. 4,800. They also expect the government to stabilize the grain price in the harvest season which is in accordance with the output price and the selling carryover to increase of the revenue for a greater prosperity.

The existence of these farmer groups relies heavily on the environmental condition where they dwell. Two decisive powers in this context are the state and the market. Besides, they also receive continous extension and aids in the form of improved seeds, chemical and organic fertilizer, and insecticide from government through the Department of Agriculture in every harvest season.

Nonetheless, they do not have legal entity. This is due to their small scope which only manages less serious issues within the groups which do not have correlation with the external parties. .

In addition, NGOs and related agencies act as partners for these farmer groups since they are fund receptors and distributors for certain programs likewise NGOs.

Institutional performance

The result of the study indicates that the overall performance of formal institutions in Pidie, Pidie Jaya, and Bireun districts still requires more improvement in term of interacting and working with the informal institutions.

Informal institutions in the study areas such as study groups and social gathering still have less contribution to the agricultural sector, especially in setting the policies and rules. Most of them tended to be more active in social activities such as mutual cooperation of the village and the commemoration of Islamic Holy days. Meanwhile, in agicultural sector, they merely contributed in rice cultivation, pest and disease control, and harvesting while no contribution found in yield processing, except in some villages in Bireuen and Pidie districts.

In Bireuen, the informal institutions were actively involved in agribusiness sector, especially in processing banana chips of kepok type inspite of not having any cooperative unit yet.

In Pidie district, women dominated the yields' processing activities, particularly in producing melinjo chips. These activities were carried out at home after working in the field or in the planting period.

Sedarmayanti (2007) suggested that performance is a system to assess and determine whether a person has carried out his work as a whole, or a combination of the work (what should be achieved) and competence (how to achieve it). Handoko (2001) also explained that perfomance appraisal is the process in which an organization evaluates or assesses the performance of its employees in order to improve personnel decisions and provide feedbacks to employees about their work. Similarly, Simanjuntak (2005) stated that performance is the level of result achievement on the implementation of specific tasks which involves individual performance, group performance, and company performance which is influenced by internal and external factors. Furthermore, Dharma (2005) confirmed that performance assessment is based on the understanding, knowledge, expertise, skill and attitude which are necessary to carry out a duty well. Also, it is based on the analysis that a person's behavior is in line with the specific criteria for each job. Mahsun (2006) added that performance is an overview of the achievement level of the implementation of programs, activities, policies, objectives, vision and mission of the organization as stated in the strategic planning of an organization. In addition, Robertson in Mahsun (2006) also proposed that performance measurement is a process of assessing the progress of work toward the goals and objectives including the information about the efficiency of resource use in producing goods with high quality, providing services, and evaluating the results of activities compared with the desired goals.

The Development of Innovation at the User Level

This study was conducted in rice production centers where farmers usually cultivated rice in term of supporting the government's programs in National Rice Production Enhancement (NRPE). In addition to rice production centers, soybean production areas were also selected as the locations for program implementation.

Pidie district has rice planting areas with the total area of 29,337 ha. In 2010, the area was 42.738 ha which required 1.078 tons of rice seeds with 25 kg/ha. The percentage of high quality seed used in Pidie in each planting season has reached 30% (above the national average of 25%). This indicates that the annual need of good quality rice seeds is 323.40 tons. To meet the needs of the seed, the existence of seed institute is considered absolutely necessary.

Seed institute is a public or private institute of Department of Agriculture and Animal Husbandry of Pidie which concerns on seed issues. This institute manages seed supplies that meet the good quality and quantity. Breeding center is an operation unit for producing basic seed and improved seed for the multiplication of seedlings which will further be distributed to the farmers.

Beside government institutions, private institutions also produce and distribute seeds. Seed is known to be one of the key success in agricultural production. Therefore, an institution under the supervision of Department of Agriculture and Animal Husbandry Pidie district dealing with the problem of seed is highly necessary.

Endeavours made through the extension primarily aim to obtain changes

in society's behavior as well as increasing the quality of life in economic, social, cultural, ideological, political, and defense and security aspects.

According Mardikanto (1993), extension activities should create positive changes and innovativeness in the society.

From the study conducted in 2010, there was still no effort to increase crop production related with the inputs. Hence, the efforts made should be timely with the appropriate quality in the right place with the right type and the right price.

However, due to the limited number of Seed Centers in providing high-quality seed, farmers often have to buy seeds from a retailer for each commodity especially rice in every growing season. Moreover, they also have lack of skills, information, and fund that prevent them from performing any seed development activity. In fact, this activity is very important to overcome the loss of seeds.

Viewed from the utilization of Human Resources, low level of formal education and skills in farm management often lead to low productivity, lack of funds for trainings in the field and unoptimal function of the Head of of Agriculture and Livestock Office in the district.

Since not the entire locations became the location of an Integrated Crop Management Field School (ICM-FS) program, the farmers involved in this study were only those who lived nearby. It is due to the fact that ICM-FS used a mass approach which allowed a lot of farmers to watch the demonstrations. Similarly, it also used a group approach where the existence of farmers groups was highly necessary in most cases.

Most areas in Pidie Jaya are used as agricultural lands. In the future, it is positively believed that this agricultural sector will be one of the leading sectors that may become the source of income for the local revenue and the farmers in this district. As the agricultural sector is the largest contributor to the formation of Gross Domestic Product (GDP), it is deemed necessary to conduct an analysis in order to find out the leading commodities in Pidie Jaya so it will be easy to determine which districts will become an agricultural base.

The agricultural sector itself consists of several sub-sectors, namely rice and horticulture, plantations, animal husbandry, fisheries and forestry.

On the other hand, wetlands and rainfed fields are known as the cultural areas in agricultural sector. The total land areas is 7,806 ha and 151 ha respectively.

The development in agricultural innovation in Pidie Jaya has already had a solid foundation in creating a more advanced agricultural area. The local government of Pidie Jaya constantly motivates public sectors, private sectors and stakeholders to develop innovation and spread it throughout the district. In inspiring and encouraging society to agricultural innovation in Pidie Jaya, the local governments have created better regulation, improved skills for innovation and developed an efficient interpretation of innovation. The innovations are in the form of field information (by adopting innovation from outside Pidie Jaya), and the effort to combine the existing innovations from the outside with the developing technology).

For the development of regional innovation, the local government of Pidie Jaya always maintains a good cooperation with other local, provincial and central governments as well as with the private sectors, universities, research institutions and public. In succeeding the program of technology innovation development to the users, they also run some policies as follows:

a. Creating and developing a culture of innovation.
b. Providing legal regulatory and framework of innovation funding.
c. Improving the diffusion of tech-nology and the development of a dynamic infrastructure for information.
d. Encouraging networking and innovation-clustering.
e. Encouraging the research and development.
f. Developing educated, creative, and skillful human resources.
g. Responding to globalization

Meanwhile, some of the innovations that have been implemented in Pidie Jaya are as follow:

a. The development of seed (in a cooperation with Aceh AIAT)
b. The development of sustainable food home region (in a cooperation with Aceh AIAT)
c. The development of Rural Agriculture through Innovation/ MP3-MI (in a cooperation with Aceh AIAT)
d. The development of an Integrated Crop Management Field School (cooperation with Aceh AIAT)
e. The grouping of commodities based on the agro-ecosystem regions (in a cooperation with Syiah Kuala University
f. The development of vocational high school.
g. The development of the orchard

The development of agricultural innovation especially in the area of Pidie Jaya aims to enhance the competitiveness in the era of globalization as well as encouraging a strong leadership among the people. The regent of Pidie Jaya whose vision to increase the welfare of his people will be manifested through agricultural innovation.

Bireuen as one of soybean-producing districts in Aceh province has crop farming and horticulture sectors as its mainstay since the availability of land and agro-climatic suitability suit the majority of Bireuen livelihood in agriculture and horticulture crops.

The development of crop farming sub-sector is primarily meant to increase the production and the productivity of food quality in term of the resilience and food self-sufficiency, improving the nutrient quality in the community, and fulfilling the needs of domestic industries and the expansion of exports which will later increase the income of rural communities through the expansion of job opportunities and enterpreneurship.

CONCLUSION

Formal institutions in Pidie Jaya has a very influential role in the development of site-specific agricultural innovation. The performance of each institutuon in Pidie and Bireuen may vary from one to another. Extension officers also play a substansial role in transferring information to the farmers. Therefore, their numbers must be adequate in order to make the extension program successful in the field. For a further study, the districts which have more informal institutions will be selected in order to obtain a more comprehensive information.

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DISCUSSION FROM PARALLEL SESSION

PAPER TITTLE	THE INSTITUTIONAL ROLE IN DISSEMINATING SITE-SPECIFIC AGRICULTURAL INNOVATION IN ACEH
AUTHOR	Abdul Azis, Basri AB, Sugeng Widodo
DISCUSSION	
QUESTION	1. Litbang condition: - Researcher = Transfering to UKM (have no skill such as elucidation) - Penyuluh = Transfering to UKM (didn't know about detail of product / didn't know about the result or research technology 2. How was that, about the strategy? 3. Strategy and educate farmers in Jogja?
ANSWER	1. There was failed connection of the inside 2. There was any one person in research development 3. The facilities are often researches
SUGGESTION	1. The institutional has many impact to transformation innovation of culture in Aceh 2. The paper should be check 3. Need to elaborate in the future the participant of the stakeholders *Notes: - Delivered in Bahasa Indonesia (Including the presentation) represented by the 3rd writer

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ISBN 978-602-7577-70-1

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