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日本熱帯帯農業学会第123回講演会・総会

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Ⅴ. 第204回研究集会要旨

2018年3月10日(土)
11日(日)

会場 玉川大学 大学教育棟2014

日本熱帯農業学会第123回講演会プログラム

第1日　3月10日（土）　　㊚：学生優秀発表賞審査対象

第1日　3月10日　（土）				
	研究発表　（発表時間12分，　質疑応答3分）			
	第1会場(502教室)		第2会場(512教室)	
	座長	講演題目	座長	講演題目
9:00 -9:15	篠原卓（東京農業大学）	1. Morphological, Physiological and Biochemical Response of 'Irwin' Mango (*Mangifera indica* L.) to Drought and Flooding ＊Bryan Apacionado・A. Sanada・K. Koshio・H. Gemma (Department of International Agricultural Development, Tokyo University of Agriculture) ㊚	入江憲治（東京農業大学）	17. Risk of early infection of Rice yellow mottle virus shown by inoculation experiments to rice varieties in Uganda ＊Patrick Jacob ODONGO[1,4]・Kojima Nobuoki[2]・Tatsushi Tsuboi[3]・Godfrey Asea[1]・Keiko T. Natsuaki[4] ([1]National Crops Resources Research Institute-Uganda・ [2]Appropriate Agriculture International Co.,Ltd・[3]Japan International Cooperation Agency・[4]Graduate School of Agriculture, Tokyo University of Agriculture) ㊚
9:15 -9:30		2. マンゴーの果肉崩壊を抑制する新しい施肥管理技術 *森田悠介・樋口浩和（京都大学農学研究科）㊚		18. タンザニア・ニャサ湖畔における小規模稲作灌漑システムの展開 *瞿黄祺・伊谷樹一（京都大学大学院アジア・アフリカ地域研究研究科）㊚
9:30 -9:45		3. 鉢吊り下げ型整枝法によるパッションフルーツの生理応答と開花結実 *飯田康仁・樋口浩和（京大院農）㊚		19. 耐塩性の異なるダイズ品種での葉・茎・根のミネラル蓄積の違い *藤井佳祐・樋口浩和（京都大院農学研究科）㊚
9:45 -10:00		4. COMPARISION OF FOREST MANAGEMENT PRACTICES AND OIL PRODUCTION OF ANDIROBA (*Carapa guinanensis*) AND TSUBAKI (*Camellia japonica*) ＊Fernanda Braga TEIXEIRA・Satoshi Yoshino・Takayoshi SATO (Department of Forest Science, Graduate School, Tokyo University of Agriculture) ㊚		20. Effects of organic and inorganic fertilizers on nitrogen mineralization and greenhouse gas production in paddy soil under two water regimes ＊Kyu Kyu Hmwe・Z. Wang・M. Yashima・K. Inubushi (Graduate School of Horticulture, Chiba University) ㊚
10:00 -10:15		5. 東アジアおよび東南アジアにおけるトウモロコシ（*Zea mays* L.）の伝播経路とモチ系統の起源 *三井崇史・奥本裕・坂本正弘・縄田栄治（京都大院農学研究科）㊚		21. ウガンダにおける高収量品種NERICA4の生育特性 *松本健資[1]・吉野稔[2]・小島伸幾[2]・宮本輝尚[2]・坂上潤一[1] ([1]鹿児島大学大学院・[2]国際協力機構専門家）㊚

10:15 -10:30	遠城道雄（鹿児島大学）	6. ネパール中等教育における農業課程導入の現状と課題-コバン地区を事例として- *安達一喜[1]・Sirjana Kafle[2]・倉田祐輔[1]・根本和洋[1]・浜野充[1] （[1]信州大学農学部・[2]AST Foundation）㊫	及川洋征（東京農工大学）	22. ベトナムにおけるドクダミ栽培とその利用 *古橋牧子[1]・Nguyen Kim Dua[2]・Tran Thanh Men[2]・Dai Thi Xuan Trang[2]・小坂康之[1]（[1]京都大学大学院アジア・アフリカ地域研究研究科・[2]カントー大学自然科学学部）㊫
10:30 -10:45		7. ミクロネシア連邦ポンペイ州ピンゲラップ島における長期間にわたる食事調査結果 山本宗立（鹿児島大学国際島嶼教育研究センター）		23. トウガラシ果実の辛み成分含量の種間経時的変化 *小森健太・加治屋勝子・坂上潤一（鹿児島大学大学院農学研究科）㊫
10:45 -11:00		8. キリマンジャロ山伝統農業におけるバナナ栽培と人々の暮らし *一ノ瀬侑理[1]・久保亮介[2]・Method Kilasara[3]・舟川晋也[1]（[1]京大院地球環境・[2]名大農学国際協力・[3]ソコイネ農業大）		24. Exploration of Plant Genetic Resources in Eastern Cambodia *KURUMADA, Shohei[1]・SEANG Layheng[2]・Kanami HATAKEYAMA[1]・SAKHAN Sophany[2]・Kenichi MATSUSHIMA[3]([1]Grad. Sch. Sci. Tech., Shinshu Univ・ [2]CARDI, Cambodia・[3]Inst. Agric. Acad. Assy. Fac., Shinshu Univ.）㊫
11:00 -11:15		9. Farmers' Initative Technologies in Rice Production after Green Revolution in Bangladesh ＊Muhammad Salim[1]・Kazuo Ando[2]・Haruo Uchida[2]（[1]Bangladesh Agricultural University (Currently CSEAS, Kyoto Univ.)・ [2]CSEAS, Kyoto University）		25. カンボジアの農村部における豚と豚肉の流通構造の解明と価格決定力の検討 ＊酒井佑大[1]・谷顕子[1]・伊藤香純[2]・浜野充[1] （[1]信州大学農学部・[2]名古屋大学農学国際教育協力研究センター）㊫

ポスター発表　（504教室　　11：15 ～12：15）

昼休み　（12：15 ～13：15）

総会　（521教室　　13：15 ～13：45）

議事
イ．平成29年度事業報告
ロ．平成29年度決算報告
ハ．平成29年度会計監査報告
ニ．平成30年度事業計画案
ホ．平成30年度予算案
ヘ．その他

日本熱帯農業学会学会賞奨励賞受賞式　（13：45 ～13：55）

受賞記念講演（521教室　14：00～14：40）

奨励賞　NTCインターナショナル株式会社
久保田亜希
エジプト，ナイルデルタにおける節水栽培・食料増産のための間作の効果とその技術開発

休憩　（14：45 ～15：00）

公開シンポジウム　（521教室　15：00～16：30）
講演テーマ：SDGs達成に向けた熱帯農業における日本の新しい農業開発協力の姿を求めて
西村美彦「これまでの熱帯農業における我が国の技術協力の経験と将来」
睦好絵美子「SDGsに向けた熱帯農業におけるJICAの取り組み」
田中章久「農業分野におけるJICAボランティアの取り組み」
町田堅一「民間企業の熱帯農業への展開」

休憩　（16：30～16：45）

懇親会　（Restaurant KEYAKI 17:00～19：00）

ポスター発表(504教室)

P1. コダチボタンボウフウ（*Peucedanum japonicum* Thunb. var. *latifolium*） の形態・生理に関する研究
Ⅰ．種子形態の特徴と発芽特性
志水勝好・*西修平・朴炳宰・遠城道雄 （鹿児島大学農学部） ㊚

P2. エジプトにおける塩ストレスが油料作物ヒマとナンヨウアブラギリの生育および光合成速度に及ぼす影響
志水勝好[1]・*有馬遼[1]・森田あす美[2]・朴炳宰[1]・遠城道雄[1] （[1]鹿児島大学農学部・[2]筑波大学大学院生命環境科学研究科） ㊚

P3. 食用カンナ数種系統間の生育および根茎・デンプン収量の比較
*宮崎彰[1]・大岩亜希斗[1]・山本由徳[1]・水上元[2] （[1]高知大学農林海洋科学部・[2]高知県立牧野植物園）

P4. ネパール中山間地域におけるオフシーズン野菜栽培への取り組み ～カスキ郡ハンサプール地区のトマト栽培を事例として～
*真田篤史・中曽根勝重・弦間洋 （東京農業大学国際食料情報学部）

P5. ダイジョとナガイモにおける粘度の比較
新小田あづさ[1]・*瀬戸口智春[2]・朴炳宰[2]・志水勝好[2]・遠城道雄[2]・北原兼文[2] （[1]鹿児島県大隅加工技術研究センター，[2]鹿児島大学農学部）

P6. ミャンマーの山岳・高原・平原地帯における*Hibiscus*属植物“CHINBAO”の栽培と利用
*長嶋麻美[1]・和久井健司[1]・菊野日出彦[1]・吉田沙樹[1]・入江憲治[1]・西川芳昭[2]・Ohm Mar Saw[3]
（[1]東京農業大学，[2]龍谷大学，[3]ミャンマー農業灌漑省農業研究局） ㊚

P7. シイタケ原木クヌギ林でのヤマチャの生育状況 －宮崎県東臼杵郡椎葉村と諸塚村を例として－
*磯田真紀[1]，近藤友大[2]，鈴木玲治[3]，竹田晋也[1] （[1]京都大学大学院アジア・アフリカ地域研究研究科・[2]宮崎大学地域資源創成学部・[3]京都学園大学バイオ環境学部）

P8. University's Potential to Cope with Depopulation and Abandoning Farming: Lesson from Bangladesh Agricuitural University Extension Center(BAUEC)
Kazuo Ando[1]・Haruo Uchida[1]・*Muhammad Salim[2]・Yoshio Akamatsu[1] ([1]CSEAS, Kyoto University・BAU, Bangladesh(Presently CSEAS))

P9. ベトナムにおけるトウガラシの探索、収集および評価
*小森健太[1]・Quoc Trung[2]・Nguyen Minh[2]・Pham Van Cuong[2]・坂上潤一[1] （[1]鹿児島大学農学部・[2]ベトナム国立農業大学） ㊚

P10．ピタヤ(*Hylocereus undatus*)花粉の長期保存に関する研究
松島大朗・*井上広大・水野宗衛（玉川大学農学部）

University's Potential to Cope with Depopulation and Abandoning Farming: Lesson from Bangladesh Agricultural University Extension Center (BAUEC)

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バングラデシュ農業大学普及センターに学ぶ過疎問題の克服と大学の可能性

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Key Words : Depopulation, Abandoning Farming Problem, Bangladesh Agricultural University Land Grand University

キーワード：過疎、離農問題、バングラデシュ農業大学、ランド・グランド・大学

Introduction

At this moment, in Japan, the university students are much expected to contribute to supporting the marginal village communities in the depopulated area in Japan. The Ministry of Education、Culture、Sports、Science and Technology(MEXT) , the government of Japan has leaded the social contribution of the universities by the University Center of Community (COC)program since 2013. Accordingly, Kochi University and Ehime University have recently started the faculty of regional collaboration and the faculty of collaborative regional innovation, respectively ,to conduct the higher education and research for enhancing the social contribution in the field of rural re-vitalization with local governments and local communities. The depopulation and aging problem have been serious to be looked over. The marginal community village is defined that the percentage of the people older than 65 years is more than 50 % of total population of the village community. In 2015, the percentage of the marginal village community is about 20 %(15,568) among the 75,622 village communities located the depopulated area of 1,028 local governments (http://www.tochikatsuyou.net/column/genkai-syuraku/). In 2017, the 817 local governments are recognized as the depopulated local government against the 1,718 of the total local governments in Japan(http://www.kaso-net.or.jp/kaso-about.htm#kasoabout02).

Why is the universities and the new faculty(not the faculty of agriculture) expected to take a role in the regional collaboration and local re-vitalization? Hypothetically, we can explain that the local re-vitalization programs are not only agricultural related but also much cultural, educational, social welfare, volunteer works, tourism, business oriented in rural Japan. Among these, the programs of culture and volunteer works may be most important to sustain the depopulated village communities. The model of direct involvement in local re-vitalization or rural development is not original in Japan. In Bangladesh, Bangladesh Agricultural University, Mymenshingh and Bangladesh Academy for Rural Development, Comilla are institutionally involved for extension in the Upozila(sub-district) where they are located. BAU and BARD have been established in 1959 and 1961 respectively during the East Pakistan period under the international cooperation program between East Pakistan and USA.The Texas A&M University assisted BAU (https: /en.wikipedia.org/ wiki/Bangladesh_Agricultural_University). On the other hand the Michigan State University assisted BARD (http://www.canr.msu.edu /afre/projects/ pakistan_academies_for_rural_development._1957_1972.) . The state university of USA had played an important role in establishment of BAU and BARD. It may be noticed that USA government tried to introduce the experience of the state university for East Pakistan that time. If ahead of the conclusion, the GHQ (General Headquarters) in Japan after the second world war had also tried to introduce the model of the state university of USA for agricultural extension and rural development to Japan, but it was not realized. This paper firstly aims to explain the establishment history of Bangladesh Agricultural University,

and secondly to review the difference between the agricultural extension and rural development model between Japan and USA and its significance for historical development briefly.

Methodology

We have mainly employed the literature survey through internet and the interviews with the concerned people in Bangladesh Agricultural University Extension Office, Mymenshingh as needed in 2017.

Result and Discussion

BAU establishment: The USAID collaboration linking with Texas A&M University provided remarkable initial support to capacity building through professional advisers, man power development (providing MS/PhD scholarships for newly recruiting academic staff) and laboratory equipment etc. Development work was supported through two IDA Credit Agreements signed subsequently between the Government and the World Bank in 1964 and 1966. Based in a traditional rural setting encompassing nearly 500 ha of fertile land stretching along the western bank of the mighty aquatic resource rich Brahmaputra river was an ideal place for a growing an agricultural university. The initial idea was to run BAU in Land Grant system, which was later converted into BAU Extension Approach.

Development of BAU Extension Approach: After one and a half decade since its inception, BAU took the initiative for generating and transferring technologies to the farmers to reorient its teaching and research programs in the context of Bangladesh. To perform this job the Bangladesh Agricultural University Extension Project has been established in 1976 and subsequently named as BAU Extension Center (BAUEC) to connect rural people with BAU. The other government departments and NGOs are also considered for active collaboration in research and extension program with this center.

Land Grant University Concept: The Land Grant University (also called Land Grant College) is an institution of higher education in the United States designated by a state to receive the benefits of the Morrill Acts of 1862 and 1890. It intended to provide a broad segment of the population with a practical education that had direct relevance to their daily lives. The history of Land Grant University goes back to 1840s when concept of publicly funded agricultural and technical educational institutions first rose to national attention in USA. The Morrill Acts funded educational institutions by granting federally controlled land to the states for them to sell, raise funds, to establish and endow "land grant" to teach agriculture and mechanical arts. Agricultural and Mechanical College of Texas (later renamed as Texas A & M University) for instance, was established in 1876 under the provision of the Land Grant Acts. Ultimately, most land grant colleges became large public universities that today offer full spectrum of educational opportunities in USA.

Difference of Agricultural Extension and Rural Development between Japan and USA: In the United States, Land Grand University becomes manager of subsidy relating to extension projects and the authority to consult with the federal government to decide the extension project's content. Therefore, the extension projects became the "extended education of the university for the people who did not attend the university. As a result, it was not necessarily limited to farmers and their families. Urban inhabitants were also be covered later. The projects covered the contents from cultivation technology to management technology, including rural development and nutrition education. On the other hand, in Japan, the extension projects became a part of the agricultural policies of the national or prefectural governments, so that the target was limited to farmers consisting of farmers and farmers' families. Cultivation technology was focused on and developed(市田（岩田）知子　1992「先進国における農業普及事業の動向—日本、アメリカ、ドイツを中心に—」46巻第2号：131－157. から引用。発表者翻訳）.

University's Potential to Cope with Depopulation and Abandoning Farming: Lesson from Bangladesh Agricultural University Extension Center (BAUEC)

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バングラデシュ農業大学普及センターに学ぶ過疎問題の克服と大学の可能性
安藤和雄*、内田晴夫*、＊ムハムッド・セリム**、赤松芳郎*
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Key Words: Depopulation, Abandoning Farming Problem, Bangladesh Agricultural University, Land Grand University
キーワード：過疎、離農問題、バングラデシュ農業大学、ランド・グランド・大学

1.Introduction

1-1.Involvment of Universities to cope with the problem of depopulation in Japan

● The Ministry of Education、Culture、Sports、Science and Technology(MEXT) the government of Japan to lead the social contribution of the universities by the University Center of Community (COC)program since 2013.

●The faculty of regional collaboration of Kochi Univ. and the faculty of collaborative regional innovation of Ehime Univ., respectively ,to conduct the higher education and research for enhancing the social contribution in the field of rural re-vitalization with local governments and local communities.

● The serious depopulation and aging problem has beenlooked over. The marginal community village（限界集落）is defined that the percentage of the people older than 65 years is more than 50 % of total population of the village community. In 2015, the percentage of the marginal village community is about 20 %(15,568) among the 75,622 village communities located the depopulated area of 1,028 local governments (1). In 2017, the 817 local governments are recognized as the depopulated local government against the 1,718 of the total local governments in Japan(2)

●The new faculty(not the faculty of agriculture)has been expected to take a role in the regional collaboration and local re-vitalization because the local re-vitalization programs are not only agricultural related but also much cultural, educational, social welfare, volunteer works, tourism, business oriented in rural Japan. Among these, the programs of culture and volunteer works are most important to sustain the depopulated village communities.

1-2.Model of Land Grand University of USA in Agricultural and Rural Development of Bangladesh (East Pakistan period)

●The model of direct involvement in local re-vitalization or rural development is not original in Japan. In Bangladesh, Bangladesh Agricultural University(Photo1), Mymenshingh and Bangladesh Academy for Rural Development, Comilla are institutionally involved for extension in the Upozila(sub-district) where they are located.

●BAU and BARD have been established in 1959 and 1961 respectively during the East Pakistan period under the international cooperation program between East Pakistan and USA.The Texas A&M University assisted BAU (3). The Michigan State University assisted BARD(4). The state university of USA had played an important role in establishment of BAU and BARD. USA government tried to introduce the experience of the state university of Land Grand University for East Pakistan that time.

●GHQ (General Headquarters) in Japan after the second world war had also tried to introduce the model of the state university of USA for agricultural extension and rural development to Japan, but it was not realized because of change of GHQ policy by USA Government in relation to Korean War.

2.Objective of the presentation

This paper firstly aims to explain the establishment history of Bangladesh Agricultural University, and secondly to review the difference between the agricultural extension and rural development model between Japan and USA and its significance for historical development briefly.

Photo 1 Bangladesh Agricultural University

Photo 2 BAUEC

Photo 3 Students and Teachers listening from farmers

Photo4 Animal vaccination Program

2.Methodology

Literature survey through internet, Interviews with the concerned people in Bangladesh Agricultural University Extension Office, Mymenshingh as needed in 2017.

3. Result and Discussion

3-1. BAU establishment and BAU extension center (BAUEC)

●USAID collaboration linking with Texas A&M University initial support to capacity building through professional advisers, man power development (providing MS/PhD scholarships for newly recruiting academic staff) and laboratory equipment etc.

● Two IDA Credit Agreements signed subsequently between the Government and the World Bank in 1964 and 1966.

●The initial idea was to run BAU in Land Grant University Model, which was later converted into BAU Extension Approach.

3-2. Development of BAU Extension Approach

●Bangaldesh Agricultural Extention Center(BAUEC) established in 1976 to connect rural people with BAU in collaboration with the other government departments and NGOs

● Practical Learning and Rearch program implemented at the BAUEC(Photo 2-6).

3-3 Land Grant University Concept

● The Land Grant University (also called Land Grant College) is an institution of higher education in the United States designated by a state to receive the benefits of the Morrill Acts of 1862 and 1890. The history of Land Grant University goes back to 1840s when concept of publicly funded agricultural and technical educational institutions first rose to national attention in USA.

●The Morrill Acts funded educational institutions by granting federally controlled land to the states for them to sell, raise funds, to establish and endow "land grant" to teach agriculture and mechanical arts.

●Agricultural and Mechanical College of Texas (later renamed as Texas A & M University) for instance, was established in 1876 under the provision of the Land Grant Acts. Ultimately, most land grant colleges became large public universities that today offer full spectrum of educational opportunities in USA.

3-4 Difference of Agricultural Extension and Rural Development between Japan and USA(5)

● In the United States, Land Grand University becomes manager of subsidy relating to extension projects and the authority to consult with the federal government to decide the extension project's content.

●The extension projects became the "extended education of the university for the people who did not attend the university. As a result, it was not necessarily limited to farmers and their families. Urban inhabitants were also be covered later.

●The projects covered the contents from cultivation technology to management technology, including rural development and nutrition education.

●In Japan, the extension projects became a part of the agricultural policies of the national or prefectural governments, so that the target was limited to farmers consisting of farmers and farmers' families. Cultivation technology was focused on and developed.

Activites of BAUEC (Photo 3 ～ 4)

Photo5 Kitchen Garden program at school

Photo6 Exhibition of farmer's produce

Refernce
(1) http://www.tochikatsuyou.net/column/genkai-syuraku/ ,(2) http://www.kaso-net.or.jp/kaso-about.htm#kasoabout02
(3) https: /en.wikipedia.org/ wiki/Bangladesh_Agricultural_University , (4) http://www.canr.msu.edu /afre/projects/ pakistan_academies_for_rural_development._1957_1972
(5)市田（岩田）知子 1992「先進国における農業普及事業の動向―日本、アメリカ、ドイツを中心に一」46巻第2号：131－157.から引用。発表者翻訳