



JISNAS-WUR Session 2018 Report

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SDG-Conference ‘Towards Zero Hunger: Partnerships for Impact’ was held from 30th to 31st August 2018 at Wageningen University & Research, in Wageningen, The Netherlands. The SDG conference brought together over 700 participants from across the globe including representatives from governments, academics, civil society and the private sector in Wageningen. They were all part of the varied program of the conference.

On this occasion, we held the joint session of Japan Intellectual Support Network in Agricultural Sciences (JISNAS) and Wageningen University & Research (WUR) on the theme of “Inclusive Value Chain Development”. JISNAS and WUR signed a Memorandum of Understanding at Kyuushu University Tokyo Office in June 2017 for the establishment of a long-term cooperation aimed at strengthening international cooperation in agricultural research and higher education. Prior to the establishment of MOU, Rothuis, Manager, International Cooperation Asia, WUR participated in the 5th Japan International Cooperation Agency (JICA)-JISNAS Forum on Human Resource Development in Agricultural Sector for SDGs at JICA Yokohama in December 2016 and gave a talk about their efforts to SDGs at WUR. JISNAS and WUR held the Joint Seminar on integrated pest management (IPM) and the workshop on improvement of agricultural research and its application in Myanmar in February 2018 (JISNAS-WUR-YAU Joint Seminar and Workshop 2018 “IPM Seminar and Workshop on Improvement of Agricultural Research and Application”, 3rd-4th February 2018, Yezin Agricultural University (YAU), Naypyidaw,

Myanmar). The JISNAS-WUR Session 2018 was our 3rd collaborative meeting.

The title of this session was “Promoting added-value production by smallholder farmers through the development of robust market-driven supply chains in an industry-community-academia collaboration”. There are many trials to develop value chains in Africa, but have the majority of smallholder farmers left behind? How does value chain development make it more beneficial to smallholder farmers? In this session, four topics relating to the development of robust market-driven supply chains in an industry-community-academia collaboration and the promotion of added-value production by smallholder farmers were delivered from Japan and Netherlands in an oral session. Then, a panel discussion with three panelists followed the oral session.

The program of JISNAS-WUR Session 2018 is as shown in Table 1.

At the beginning of the JISNAS-WUR Session 2018, Kazuo Ogata, Chair of JISNAS remarked about purpose of the session and JISNAS-WUR collaboration. As the first speaker, Jiro Aikawa, Senior Advisor, JICA, talked “Introduction of SHEP (Smallholder Horticulture Empowerment and Promotion) approach as an innovative extension method in Africa”. Better extension service for small scale farmers in developing countries is key for achieving SDGs such as poverty reduction, job creation, and access to higher education for kids, etc. SHEP was developed by JICA’s technical cooperation project started in Kenya in 2016 as one of the agriculture extension

Table 1. The program of JISNAS-WUR Session 2018

Program 1. Oral Session

Chairpersons: Keisuke Ito, Director, Rural Development Department, JICA, Japan
Chiharu Nakashima, Professor, Mie University, Japan

Introductory remarks: Kazuo Ogata, Chair of JISNAS / Professor, Kyushu University

Topic 1: Introduction of SHEP Approach as an innovative extension method in Africa
Jiro Aikawa, Senior Advisor, JICA, Japan

Topic 2: Empowering farmers to become partners in robust market-driven supply chains: an alternative evaluation method for assessing value chain dynamics
Jos Verstegen, Senior Researcher Entrepreneurship, WUR, The Netherlands
Kazuhisa Goto, Liaison Scientist, WUR, The Netherlands / NARO, Japan

Topic 3: Value adding technology and its application system
Tadashi Yoshihashi, Senior Researcher, JIRCAS, Japan

Topic 4: Agricultural extension activities by Tokyo University of Agriculture; From greening of arid land to nutritional improvement in Africa
Yoichi Sakata, Professor, Tokyo University of Agriculture, Japan

Program 2. Panel discussion

Moderators: Shuichi Asanuma, Board Member, International Institute of Tropical Agriculture (IITA) / Senior Adviser, JICA, Japan
Arjo Rothuis, Account Manager Asia, Wageningen International, WUR, The Netherlands

Panelists: Jos Verstegen, Senior Researcher Entrepreneurship, WUR, The Netherlands
Kazuhisa Goto, Liaison Scientist, WUR, The Netherlands / NARO, Japan
Hiroshi Ehara, Professor, Nagoya University, Japan

approaches and gives concrete solutions for these basic issues on extension as well as realizing market oriented agriculture. This approach composed of series of activities with essential steps: the most important activities are market survey and making crop calendar done by farmers themselves with support of extension staff. Farmers can be aware of market needs and make decision which crops they are going to grow based on the results of the survey. In order for farmers to develop their capacity, SHEP introduces a theory called “Self Determination Theory”. People possess three basic needs; autonomy, competence and relatedness. Activities based on SHEP Approach as extension services are well designed to satisfy both Economic and Psychology aspects. Many positive impacts such as income generation, improvement of livelihood, re-investment for better farming, etc. can be seen in various countries.

Jos Verstegen, Senior Researcher Entrepreneurship, WUR gave a talk as duo presentation with Kazuhisa Goto, Liaison Scientist, WUR / National Agriculture and Food Research Organization (NARO), about “Empowering farmers to become partners in robust market-driven supply chains: an alternative evaluation method for assessing value chain dynamics”. The evaluation research presented at the SDG conference was conducted in the context of the 2SCALE (Towards Sustainable Clusters in Agribusiness through Learning in Entrepreneurship) program which was developed in sub-Saharan Africa and coordinated by IFDC. The goal of 2SCALE is to improve rural livelihoods and

food and nutrition security in nine African countries. To this end 2SCALE forges public-private partnerships, with private partners varying from local producer organizations and SMEs to large-scale companies such as seed companies, processors, and trading companies. The approach is based on (1) formation of agribusiness clusters - local networks between smallholder farmers themselves, and with service providers - to improve competitive intelligence and bargaining power, (2) integrating the agribusiness clusters in value chains, with backward linkages to input supply chains and forward linkages to food supply chains, and (3) enabling fair business environments with better access to information and finance, in particular for the weaker actors. In the project Wageningen Economic Research developed and tested a so-called Value Chain Laboratory (VC-Lab) for the assessment of two 2Scale initiatives: (i) sorghum value chain in Meru County, Kenya and (ii) soybean value chain in Tamale, Ghana. The VC-Lab consists of three steps: (i) Desk research and Value Chain Mapping, (ii) Value Chain Games involving 2Scale farmers and nonparticipating farmers, and (iii) Agent Based Modelling. The study provides insights into the trust levels of farmers, their risk perception and collective action strategies, and provides scenarios for maximal impact. Data gathering and analyses took place in 2015 and 2016. In their presentation, the gaming approach and reveal some of its results were briefly explained.

Tadashi Yoshihashi, Senior Researcher, Japan

International Research Center for Agricultural Sciences (JIRCAS), talked about “Value adding technology and its application system”. MAFF of Japan, had set “Global Food Value Chain (GFVC) policy”, which aims to support activities delivering higher values and increase profits for each stakeholder from production to consumption in food value chain. Activities on food value chain improvement under JIRCAS research project in line with GFVC policy, and Consultative Group on International Agricultural Research (CGIAR) research program were presented to show the efforts to transfer Asian experiences to Africa toward upgrading food value chains. Traditional rice processing technology, “pop-rice”, roasting rough rice to puff rice kernel was used for ornament in Japan and Thailand, and sweets in Vietnam and India, and almost disappeared in the region. However, the technology requires less equipment, and rough rice with rather higher moisture content can directly use as material. Also, simple heat source can be used for the process. Since less equipment and process are required for the technology, it might be suitable for on-farm process in African countries, especially avoiding quality losses during rice milling and postharvest procedure and obtaining value-added pregelatinized rice kernel. On the other hand, white guinea yam (*Dioscorea rotundata*) which is one of the important regional staples in West Africa, can be categorized as “orphan crop”, therefore there is remaining potential in productivity and quality improvements. Utilization of local genetic diversities was required, however lacks tools to evaluate their properties hinders effective elite lines selection. Since East Asia has experience to utilize yam species (*Dioscorea* spp.), we had transferred various quality evaluation methodologies as white guinea yam selection tools. Both cases show possible knowledge transfers by accelerating partnerships among African and Asian stakeholders.

Yoichi Sakata, Professor, Tokyo University of Agriculture, introduced “Agricultural extension activities by Tokyo University of Agriculture (NODAI); From greening of arid land to nutritional improvement in Africa”. Tokyo NODAI has recognized that the issues of food production and safety should be discussed and solved on a global scale; therefore, “return man to the farm of the world” is our ultimate educational and research goal. To achieve this, we are currently conducting various types of extension activities related to SDGs (Goal 2; End hunger, achieve food security and improved nutrition and promote sustainable agriculture)

in the world: 1) Cacao production for smart consumer by agroforestry system from Amazon, Brazil; 2) Improvement of livelihood and health conditions of Tongan people by the effective utilization and new processed products of breadfruit; 3) Project on promoting sustainable agricultural conditions for poverty reduction in Kampong Cham Province, Cambodia; 4) Research project on advanced and sustainable water utilization associated with greening potential evaluation in Djibouti, Africa; 5) Stimulating use of local food resources in Africa to improve nutrition and livelihoods: A new integrated food consumption assessment tool for better decision making in nutrition interventions. Taken together with the experiences we obtained from these extensions, he proposed to discuss what universities could promote to develop inclusive value chains in developing countries.

In the panel discussion followed the oral session, the points were what were the lessons learned from each presentation in terms of technology dissemination to smallholder farmers in promoting added-value production by them through the development of robust market-driven supply chains in an industry-community-academia collaboration? Three questions described below were put up by the moderators. 1) Can small holder farmers respond adequately to the needs of market-driven supply chains? 2) How feasible is technology dissemination through value-chain development? 3) What is the role of academia in promoting value-chain development? After comments from the panelists were delivered, we confirmed some gists as follows: i) markets should be considered first before technology development; ii) farmers’ motivation will be more important than technology; iii) farming has to be seen as a business; iv) use of games may be valuable in scientific evaluation studies; v) trust among value chain actors is a key driver of success; vi) quality of agricultural products requires scientific evaluation.

We shared the former experiences of smallholder farmers’ income generation through value chains development in Asia and Latin America as well as the recent examples of innovative agricultural extension approach in Africa and discussed how to develop inclusive value chains in developing countries and what will be the role of agricultural extension service. Through this session, we could learn the six important points to promote added-value production by smallholder farmers through the development of robust market-driven supply chains.