

Toward Sustainable and Harmonized Development of Lao Agriculture

Final Report of SAKURA SCIENCE PLAN in 2015
for NAFRI Young Staff



Edited by Satoshi YOKOYAMA, Yasuyuki KONO and Keiko NAKAMURA
(Nagoya University, Kyoto University and NAFRI, Lao P.D.R.)

January, 2016

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Edited by
Satoshi YOKOYAMA, Yasuyuki KONO and
Keiko NAKAMURA

Organized by



Graduate School of Environmental Studies,
Nagoya University



Center for Southeast Asian Studies,
Kyoto University



National Agriculture and Forestry Research Institute (NAFRI),
Ministry of Agriculture and Forestry,
Lao P.D.R

Sponsored by



Japan Science and Technology Agency (JST)

Preface

The SAKURA Exchange Programme in Science entitled: International Workshop of Capacity Building for Agricultural Development in Laos has been held in October 1-10, 2015. This is the second exchange programme supported by Nagoya University.

National Agriculture and Forestry Research Institute (NAFRI) has long lasting cooperation with Postgraduate School of Environmental Studies, Nagoya University and Center for Southeast Asia Study (CSEAS), Kyoto University for mutual benefits of fostering academic exchange and partnership in order to further research and capacity building on both sides.

The areas of cooperation are to promote academic exchange and partnership between the institutions through programs of joint research, conferences, publications, sharing of library and research resources, access to the Internet and electronic media, and the exchange of faculty and research staff. Both parties agree to act as hosts for faculty and research staff on academic exchange from the partner institution.

Dear readers:

This year is a historical event for the cooperation between National Agriculture and Forest Research Institute (NAFRI) and Nagoya University where we have been selected to be as Laos Satellite office of Nagoya University Asian Satellite Campus Institute (ASCI). The launching ceremony of ASCI has been successfully opened in September 13th, 2015. This event opens up a new opportunity for NAFRI and Lao researchers to have access to Ph. D study while keeping the work in the country.

NAFRI has been established in April 19th, 1999 by combining existing research centers and stations and involving of several research fields e.g. crops, livestock, fishery and forestry to organize agriculture and forestry research in more holistic and systematic approach for effective and sustainable agriculture and forestry development. For 16 years of its establishment, NAFRI researchers and staff had carried out the research in agro-biodiversity, plant and livestock breeding, improving the productivity and related agriculture policy contributing to agriculture and forestry development in Lao PDR. The international cooperation with partners including cooperation with CSEAS and Nagoya University has significantly contributes to the successful achievements in agriculture and forestry research of NAFRI.

NAFRI has formulated Agriculture and Forestry Research Strategy 2025 and grouped into six broad thematic areas or strategic research programs guiding future practice-oriented interventions:

1. **Sustainable agro-biodiversity programme**; this programme aims to:
 - Coordinate the national agrobiodiversity programme,
 - Develop a sustainable practice for natural resources utilization, management and conservation of agriculture genetic resources to support of potential future needs for food security and suitable commercial production,
 - Support the development of improved methods, mechanisms and technical recommendations to ensure the sustainable management of agro-biodiversity.
2. **Improved agriculture productivity programme**; this programme aims to:
 - Develop and use appropriate agricultural technologies (effective low cost technologies) for improvement of agriculture production systems,
 - Testing and developing good agriculture practices relating to soil nutrient depletion, loss of agro-biodiversity, breeding programs, maintaining of land productivity, developed of skilled human resources and improved water use efficiency,
 - Enhancing the regional competitiveness of the Lao agricultural sector through improved post-harvesting and processing technologies, and local value-addition to enable access to markets and viable integration in these markets.
3. **Agriculture adaptation to climate change programme**; this programme aims to:
 - Develop climate information services (agro-climate advisory) and deliver improved farmer guidance for better and climate-safe management of production, and provide technical support to the climate adaptation capacity of farmers,
 - Develop climate-smart agricultural practices through testing and scaling-up of technologies and improved practices that are needed to further build farmers' adaptive capacity to climate change,
 - Strengthening of policies and institutions for climate-resilience through vulnerability assessments, scenario modeling and policy analyses to provide the information and tools for planners and decision-makers for well-targeted support to agriculture and food security under changing climatic conditions.
4. **Agriculture and forestry policy research programme**, this programme aims to:
 - Provide policy makers at different levels (MAF and other concerned institutions) with information and guidance on emerging national, regional and global opportunities and challenges in the sector,
 - Improve rural livelihoods and rural empowerment through relevant policy development,
 - Improve accessibility to information and knowledge of different actors so they can make more informed decisions at all levels.

5. **Capacity building programme**; this programme aims to further build on NAFRI's institutional capacity, focusing on three areas:
 - Human resources development,
 - Organizational and institutional development, and
 - Research infrastructure and facilities development.
6. **Information and Communication programme**; the programme aims to:
 - Improve communication facilities and management systems (ICT, library, information and communication support),
 - Develop 'AKIS' (sharing of information, resources and responsibilities; networking; linking),
 - Strengthen multi-level and multi-stakeholder information, communication and coordination.

The SAKURA exchange programme is a good example of our cooperation agreement for capacity building and responds well to our research strategy. This programme provides a great opportunity for 10 NAFRI young staff and researchers to visit Nagoya University, Center for Southeast Asia Study and many interesting places. The Home-stay program with farmers in prefectures also gives a chance for our young staff to live and to learn Japanese culture, Japanese working experiences, and social lives in rural areas.

I do believe that the experiences gained, Japanese culture and social economic development seen and observed during this learning trip will be remained in the bottom of the heart of NAFRI young staff forever. I also do hope that the lessons learned from this trip will be useful for their future work at NAFRI and useful for future cooperation with Japanese colleagues.

On behalf of NAFRI management, I would like to acknowledge Professor Kono Yasuyuki, the Director Center for Southeast Asian Studies, Kyoto University, and Prof. Satoshi Yokoyama Postgraduate School of Environmental Studies, Nagoya University for their support and fruitful cooperation. We look forward for future meaningful cooperation in the future.

Dr. Bounthong BOUAHOM
Director General
National Agriculture and Forestry Research Institute,
Ministry of Agriculture and Forestry, Lao P.D.R.

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1. Introduction

In 2014, the Center for Southeast Asian Studies (CSEAS) at Kyoto University invited ten researchers from National Agriculture and Forestry Research Institute (NAFRI) in Laos by Japan-Asia Youth Exchange Program (SAKURA Exchange Program in Science). The Graduate School of Environmental Studies (GSES) at Nagoya University participated in the SAKURA program by the CSEAS at the planning stage last year. In 2015, with cooperation of the CSEAS, we again applied to the program and invited ten researchers from NAFRI.

Both the CSEAS and the GSES are in special cooperative relationship over many years with the NAFRI. Although there are many Japanese universities which want to conclude an agreement for academic exchange and cooperation with the NAFRI, the NAFRI have concluded the agreement with only the two of our universities. Prof. KONO Yasuyuki, Director of the CSEAS, and me have been supporting for capacity building of young researchers in NAFRI through conducting cooperative research since the early 2000s. The GSES had conducted Global COE Program funded by JSPS from 2009 to 2013, and then students of doctor's course and faculties had implemented On-site Research Training (ORT) in order to identify issues and problems threatening the sustainability in Laos by working in collaboration with NAFRI. At the same time, the GSES invited four senior researchers from NAFRI each year for a one-month period as a Visiting Academic Staff between 2010 and 2013, and two young researchers as students of doctor's course. In addition, a NAFRI researcher enrolled at the GSES as students of doctor's course, when Nagoya University Asian Satellite Campus was established at Laos in October 2015. So far, Nagoya University and NAFRI carried out many research and educational activities together.

Laos is achieving rapid economic growth after the 2000s. In accordance with that, the agriculture and forestry sectors which are engaging in approximately 70% of population are undergoing great changes. Especially, in mountainous areas that occupy more than 80% of the land area, self-sufficient swidden farming used to be the most common form of agriculture, but now it is changing into cash crop production and para-rubber plantation. On the other hand, in lowland areas, the agricultural labor force has been reduced due to expanding the employment opportunities in non-agricultural sectors. Although Laos is confronted with many difficulties, agriculture and forestry in Japan has already experienced such changes. This training provides an opportunity to think about future of Laos to NAFRI researchers by observing Japanese agriculture and forestry, and rural areas of Japan. Therefore we incorporate the following topics in the program for NAFRI researchers:

1. Lecture on historical development of agricultural and forestry policies, and agricultural cooperatives in Japan by Norinchukin Research Institute Co., Ltd.
2. Agricultural and forestry experience in mountainous village (Ota-cho, Toyota city, Aich prefecture)
3. Visit to plant factories that fully depend on artificial lighting in Kyoto city

By observing Japanese agriculture and forestry, some NAFRI researchers may think that Laos also want to be like Japan. However, Laos still remains a lot of unspoiled nature and traditional knowledge that was already lost in Japan. To increase the rationality and convenience is not a goal of agriculture and forestry development. We would like to watch what kind of future image they depict based on experience of ten-day tour in Japan.

Acknowledgements

This Program is financially supported by Japan-Asia Youth Exchange Program in the Japan Science and Technology Agency (JST). I am very grateful to Prof. KONO Yasuyuki (Director of the Center for Southeast Asian Studies at Kyoto University), Assoc. Prof. HYAKUMURA Kimihiko (The Institute of Tropical Agriculture at Kyushu University), Mr. SHIMIZU Tetsuro (Director of Basic Research Division at Norinchukin Research Institute Co., Ltd.), Mr. YAMADA Yukihiisa (Researcher at Norinchukin Research Institute Co., Ltd.), and Mr. TODA Yusuke (President of M-easy Co., Ltd.) for their valuable cooperation in this program. I would like to show my appreciation to the Education and Research Center for Sustainable Co-Development at Nagoya University that offered continuing support. I would also like to express to Mr. FUKUSHIMA Naoki (Graduate Student of the Graduate School of Asian and African Area Studies at Kyoto University), Ms. SHIMIZU Sayaka (Graduate Student of the Graduate School of the Environmental Studies at Nagoya University), Mr. SAKITA Seiichiro (Graduate Student of the Graduate School of the Environmental Studies at Nagoya University), Ms. IDE Michiyo (Secretary of the Center for Southeast Asian Studies at Kyoto University) and Ms. NAKAMURA Keiko (Secretary of the Graduate School of the Environmental Studies at Nagoya University) for their support. I would like to express my sincere thanks to all who have supported me in conducting this program.

YOKOYAMA Satoshi
Professor
Graduate School of Environmental Studies,
Nagoya University

2. Announcement of the Program

Nagoya University, represented by Prof. YOKOYAMA Satoshi, and Kyoto University, represented by Prof. KONO Yasuyuki, jointly organize the capacity building program for young staff of NAFRI as a part of collaborative activities between Nagoya and Kyoto Universities and NAFRI.

Aims

This program aim at providing the opportunity for young staff of NAFRI to learn advanced agricultural technology and institutions of Japan, to improve the ability of communication, presentation and debate in the international occasion, and to have stronger motivations to develop themselves as a next-generation leader.

Participants

The qualifications of participant are as follows.

- 1) Having a position in NAFRI
- 2) Aged 40 or below
- 3) Having a strong intention to be a next-generation leader
- 4) The persons who have never been to Japan are prioritized.

The number of participant is 10 persons or less.

Period

From 1st Oct. 2015 to 10th Oct. 2015 (10 days)

Cost

A round-trip air ticket and all the expenditure in Japan, including the cost of accommodation, food and domestic traveling, are provided by the program. The other expenditure, including the costs for acquiring passport and visa, must be covered by the participant.

Duty of participants

- 1) The participants have to present the summary reflections of the program on Day 9. So they are requested to bring the necessary equipment for preparing the presentation such as PC and digital camera
- 2) The participants must submit the written report. The expected contents of the report will be provided later.

Program

Day	Date			Major activity	Stay at
1	30 th Sep.	Wed.	PM	VTE/HAN VN0920 20:00/ 21:00	
2	1 st Oct.	Thu.	AM	HAN/NRT VN310 00:45/07:35 Arrive at Narita Orientation and lecture	Tokyo
			PM	National Museum of Emerging Science and Innovation	
3	2 nd Oct.	Fri.	AM	1. Lecture of farm co-op association system 2. Lecture of agriculture and forestry business policy	Toyota
			PM	From Tokyo to Toyota city by Bullet train and bus	
4	3 rd Oct.	Sat.	AM	Rice harvest	Toyota
			PM	Dry rice, Shelling	
5	4 th Oct.	Sun.	AM	Organic farming, natural agricultural methods	Toyota
			PM	Vegetable harvest, seeding	
6	5 th Oct.	Mon.	AM	Thinning of man-made forest, hatchet	Toyota
			PM	Thinning of man-made forest, hatchet	
7	6 th Oct.	Tue.	AM	Excursion of Toyota factory 9:15-11:25	Nagoya
			PM	Lecture at Nagoya University	
8	7 th Oct.	Wed.	AM	From Nagoya to Kyoto by bullet train Lettuce Factory tour 11:00-12:00	Kyoto
			PM	SUNTORY Factory tour	
9	8 th Oct.	Thu.	AM	Lecture at Kyoto University	Kyoto
			PM	Preparation for the presentation	
10	9 th Oct.	Fri.	AM	Preparation for the presentation	Kyoto
			PM	Presentation	
11	10 th Oct.	Sat.	AM	KIX/SGN VN0321 10:30/13:50	

Remarks

- 1) All the participants must be responsible for the safety of his/herself and his/her belongings during the program period.
- 2) The program will not prepare a Lao language translator. The organizers sincerely expect you to survive in Japan without Lao language.

Source of program fund

This program is a part of “Sakura Exchange Program in Science” under “Japan-Asia Youth Exchange Program in Science”, and financially supported by Japan Science and Technology Agency (JST).

Organizer

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3. Summary and Reflection

Ms. Latsamy PHOUNVISOUK

Personal Information

Name: Latsamy Phounvisouk

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Female

Age: 34 years old

E-mail Address: meetouna@yahoo.com

What you learnt from this program?

I have learned about Japanese agriculture. It shows that growth cannot be sustained without technological and industrial upgrading and structural transformation of the country's economic activities. Attracting Japanese agriculture is generally seen as an integral part of the development policy mix of successful emerging economies that leads the way to the required sustained economic transformation. As an example, according to SAKURA



exchange program in science (2015), say that the cause for Japanese's sustained rate of economic growth and poverty reduction in the last 90 years is its development strategy which is based on development of agriculture as a priority when the country was at low levels of incomes and a timely shift toward investment in labor-intensive manufacturing industries where Japan has a comparative advantage when the output and incomes from agriculture grew. I am very happy to know and learn about this from Japan.

Upon returning from my trip to Japan, many people asked, what could you learn about farming from Japan? It's hard to pick the most applicable thing since their farming system doesn't exist in a vacuum. It fits into a larger culture that values the craft of

food production. The art of making noodles or rice cakes may be passed down from generation to generation.

I also learned how a Japanese farmer succeeded by Agricultural Cooperative, because government and farmers are linkage very well and work together with each other. For example, the Japanese agriculture project support instruction for farming, supply of agricultural materials, marketing of agricultural product, credit, mutual insurance, regional development, welfare service, etc.

How you apply your experience of this program into agriculture in Lao?

I saw that Japanese people use a lunch box made of the bamboo leaf in Kyoto city. I felt that it is interesting to make lunch boxes of the bamboo leaf. I would like to apply my experience of this program to my professional career. I think it is a task that should be done with care as health experts. It is recommended that lunches are packed in lunch boxes and not in plastic bags. An insulated lunch box is also a good idea. It will keep the food inside nice and cool.

I also would like to apply the Japanese agriculture co-op association system into Lao agriculture in the future soon.

How you evaluate this program?

1. It is good for young NAFRI staffs to learn about how Japanese agriculture and the Japanese rural lifestyle developed a point of the social culture.
2. Japanese rice is very delicious.
3. Japanese people are very kind and gave me a warm welcome.

Suggest what kind of activities are most needed when other Lao researcher join this program next year?

1. Next year after returning home from Japan, all participants of NAFRI should submit the final report on time.
2. The most important choices you will ever make are not to bring big luggage in the Exchange program of next year. Because all of your needed possessions must be transported safely and securely without damage. I would like to suggest you not to bring big luggage, it is very difficult to move with the big luggage in Japan.

Ms. Tounglien VILAYPHONE

Personal Information

Name: Tounglien VILAYPHONE

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Female

Age: 39 years old

What can you learn from this program?

I learned a great real in the SAKURA Exchange Program in Science. And it was helpful for me. The first day lecture by JA was an oral presentation which intended to present information of the farm co-op association system and Agricultural Policy in Japan. I was able to solve my question about Japanese agriculture development, and it cultivated my knowledge. Very important point is that JA has great knowledge to manage and organize farm groups.

On farm during my stay, I discovered the soul of the Japanese rural society culture and lifestyle with help and knowledge of the host family. They are very kind and welcoming. I learned the process of rice production, organic farming of vegetable and forests management. And we made Japanese food such as Mochi from sticky rice, Oudong (Noodle) and etc.

I am so interested in high quality farm machine to reduce the work force. Machine helps farmers to make better use of muscle power to do work.

I felt it was nice that professional agriculture-tour operator offers the rice harvesting or some agricultural activities to the visitors. Visitors practically enjoy harvesting. And the farmer gets income. Then the agriculture business



will be more attractive to farmers.

Especially what made a deep impression on me was TOYOTA Motor and TOYOTA Museum through which we acquired a brief understanding about cars. Japanese car is widely popular. Vegetable Factory and Suntory Beer's Factory were also nice. They gave me a useful tip on the quality control for steady supply.

How to apply your experience of this program into agriculture in Laos?

Farmers in Laos and Japan are under different condition such as topography, climate and etc. According to my observation from this program, I will apply farm machine into agriculture in Laos to save the labor. And I will apply introduction of agriculture and tourist (agrotourism). It is not only for agriculture production of the farmer but also for inbound groups who study agriculture. I want to create markets for them to add value of agriculture and rural production. Thad Luang Temple in Vientiane is a popular city for tourism as a heritage city. Every year we have a big Festival. It is important for farmers to do sustainable management by introducing farm coop and improving their knowledge or skills. However, some technique can't apply into Laos easily. But I believe that Laos became modern agriculture country in the future and farmer live in rural area happy with high income.

How you evaluate this program?

This program helps young NAFRI staffs to learn and improve knowledge about agriculture development in Japan. We are happy and impressed by SAKURA Exchange Program. Japanese are kind and take care of us and organize well during our stay in Japan. But the day was short. Next year 2 or 3 weeks would be better for us by divided into 2 groups NAFRI staffs and farmers.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

In my observation, the young NAFRI staffs need to research agriculture such as rural agriculture development for vegetable and marketing and analysis the problems in vegetable

Finally I would like to say thank you very much for JST to support Nagoya and Kyoto University and to organize this program. I hope this program to be continued every year to help young NAFRI staffs.

Mr. Thanongsinh DENGKHOUNXAY

Personal Information

Name: Thanongsinh DENGKHOUNXAY

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Technician

Sex: male

Age: 33 years old

What can you learn from this program?



It was the best opportunity for me to join with the SAKURA Exchange Program in Science in Japan. During my stay for eight days I could learn many things from this program such as:

I had known livelihoods community of Itadoli, they have been practicing sustainable agriculture.



I have been learning about conducting an integrated system of organic agriculture production for export.

I knew that the forestry conservation management of Japan. Moreover, I knew rice production of Japanese farmers.

The two things that I knew were cooking community in Itadoli and work time management of Japanese.

How to apply your experience of this program into agriculture in Lao?

Through this program, I took new experience in Japan, improving my work and practicing on agriculture, compared with Japan and Lao farmers. Especially, the approach of the agriculture integrates system in a limited area, planting organic crops, protecting sustainable forests and practicing on Participatory Agriculture production.

How to evaluate this program?

This program is very important in order to build up the agricultural capacity of technical Lao staff. This program is very useful to learn the best techniques of agriculture production in Japan, and I can adjust and apply it in Lao. I would like to express that all participants concentrated to learn the new knowledge during this study tour. Knowledge will be used in Laos as soon as possible.

Suggest what kind of activities are most needed when other Lao research join this program next year?

For my experience in this workshop, I would like to suggest that NAFRI researcher join this program next year, and study characteristic of pattern living and working methods of Japanese. Because Japanese are diligent, high patient, honest, high knowledgeable, high respect to regulation and highest effective worker. I think that if Lao people have learned them and brought these things to Lao, Lao society will flourish as well as Japan.

I would like to express my gratitude to the Japan government which support and provide a lot of things to me during my stay in Japan. I hope that it will be held the best workshop like this in the future.

Mr. Noulay KEOMANY

Personal Information

Name: Noulay KEOMANY

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Male

Age: 39 years old

What can you learnt from this program?

Purpose of this visit to Japan was to learn Japanese agriculture, and to interact with local people to deepen understanding. Some NAFRI staffs had never been on an airplane before, much less abroad. We are anxious about whether we could handle this program without any problem. At the same time, we are excited about what lay ahead.

I saw, hear, felt and learned a lot from this program, for example Japanese Agriculture Cooperative, rice production, vegetables factory, and forest management. I also knew and realized Japanese culture and had a chance to cook Japanese food, Mochi, Udong and etc.

Especially TOYOTA Motor and Suntory Beer's Factory tour where we joined was exciting. Factory staffs were enthusiastic guiding us. These factory tours leveraged my knowledge. Discussion and experience sharing with Japanese students were interesting. This experience and ideas remain me of different possibilities of life.



How to apply your experience of this program into agriculture in Laos?

In my experience with this program, I was interested in 2 titles, Rice production and Vegetable farm. I would like to apply these agricultures into Laos, because these production systems in Japan are similar to Laos.

How you evaluate this program?

It can be concluded that this program is very important for developing countries to increase agriculture products with high technology.

I actually evaluate this program. It was very good to help human resources development of young NAFRI staffs. But the day was very short to visit and to experience all activities. I think this program should promote long one that we can learn a lot from this program and deepen our friendship next year.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

I suggest the farm activities of coffee production that we can learn with the farmer about group production, stocks and marketing. I want to put the coffee production in Lao on the right direction.

Mr. Thommanivong PHENGTHILATH

Personal Information

Name: Thommanivong PHENGTHILATH

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Male

Age: 40 years old

What can you learnt from this program?

I learned a lot from SAKURA exchange program. Especially Itadori, rural area of Toyota, was unforgettable where I experienced rice and vegetable production on farm and sustainable forest managements. And I had a chance to touch Japanese culture, and host family helped us to cook Japanese food. It was a delightful experience.

Agriculture-Tour that offer planting or harvesting to visitors is the key to managing farm for the long term, maintaining the unique farm features like biodiversity, clean air and water, habitat and cultural heritage, enhancing farmers skill and income.

I have learned the role and function of Japanese Agricultural Cooperative (JA) and the agriculture management and its policy in Japan.

I visited Toyota factory, and the guided walking tour last 130 min. I could see about exciting history of Toyota.



How to apply your experience of this program into agriculture in Laos?

I will apply my experience that Japanese farmers organize the village community for helping each other into Lao community. Although farmers have village community to help old or poor people, securing to access the farm loan to buy machine, I want to apply the village community with farmer organization, because we don't have it in Laos now.

In the future I want to apply the Innovations of Lettuces production in Laos, because in the spread has high technology to use lettuce production because of the



environmental control system so have well for beauty health and shorten successes cultivation from 42 days.

How you evaluate this program?

This program is good for me and gave me more knowledge and experience finding how Japanese develop their agriculture in the past and now.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

Laos has a good land, pure water and air, dam hydropower electricity and low labor. So I want the Japanese organization bring more activities as a good for Laos.

Mr. Invanh KANNALY

Personal Information

Name: Invanh KANNALY

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Male

Age: 38 years old

What can you learnt from this program?

Japan is the country which leads the high technology and research fields compared with Lao. Lao don't have modern machine to make products. We use the old materials. Joining this activity in Japan, I could learn a lot about Agriculture production, forest maintenance and how to make Japan food: Mochi and Oudong (Noodle is the local food of Japan).

It was also very exciting to visit Suntory beer factory, TOYOTA factory and miscellaneous station of Japan. I hope all experience helps me in the future.



How to apply your experience of this program into agriculture in Laos?

The Lao is a developing country. Laos and Japan are under different condition such as topography. I will try to apply Japanese agriculture to Lao. The major work in Luang Namtha is the agriculture product: rice, banana, corn, sugarcane and etc. After coming back to Lao, I try to improve my knowledge and skills for Lao farmer to know the new technique of agriculture by making cooperative farmer groups. And I believe that Laos will become modern agricultural country in the future.

How you evaluate this program?

This program was helpful for everyone of NAFRI to learn new things about agriculture product and the development of Japan. So we are very happy and impressed by SAKURA Exchange Program in Science. I hope other NAFRI staff will also participate this program in the future. I hope next program could be a long stay. Because I felt it was short. 3-4 weeks would be better.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

The activity I need to do in Lao is agriculture research such as rice, vegetable crops, livestock etc....

Finally, I would like to take advantage of this opportunity to thank you all for your corporation. And thank you very much for Nagoya University to help us and I hope all experience of this program will be useful for me. Thank you.

Mr. Banthasack VONGPHUTHONE

Personal Information

Name: Banthasack VONGPHUTHONE

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Male

Age: 38 years old

What can you learnt from this program?

I learned a lot in the SAKURA Exchange Program in Science. And it was useful for me that I could take the first day listening lecture about the farm co-op association system, Agriculture and Agricultural Policy in Japan by JA (Japanese Agriculture Cooperative, Norinchukin Research Institute Co., Ltd.). The very important point is that they have appropriate knowledge to manage and organize cooperative farmers group. They have

10,000,000 members and over 700 JAs in Japan.



For 4 days during my farm stay, I could figure out the rural society culture and lifestyle of Japan with the host family. They are very kind and friendly, and gave me a warm welcome.



I learned the process of rice production, Organic farming of vegetable, Forests managements and how to make Japanese food such as: Mochi of sticky rice, Oudong (Noodle) and etc. On farm I was interested in the farm machine to save much labor. And Agriculture-Tour is an ideal opportunity for common interest and students to experience and stay in the rural country. Some farm stay offer scheduled program for rural economic development. Farm stay activity includes rice production, planting,



harvesting, campfire, and feeding farm animals. And that will be totally in farmer income.

We visited TOYOTA Motor and TOYOTA Museum. The Japanese car is so popular worldwide. And we also visited Vegetable Factory and Suntory Beer's Factory. Japan exports a lot of industrial products like Cars, Televisions, Farm machines and etc. Therefore Japanese economy becomes strong.

How to apply your experience of this program into agriculture in Laos?

Laos and Japan are different condition such as topography, climate and etc. It is therefore difficult to apply everything. For my observation from this program, I will try to apply farm machine into Laos's agriculture to save much labor.

Luang Prabang is popular city for tourism as a heritage city. Every year over 300,000 tourists visit Luang Prabang. Farmer may provide wide variety of educational and recreational activities by Agro-tourism. It is important for farmer in Laos to improve their knowledge, marketing and skills by Cooperative farmers group.

Some technique can't apply into Laos. But I believe that Laos become modern agriculture country and the farmer who lives in a rural area will get high income in the future.

How you evaluate this program?

This program is excellent to help young NAFRI staffs to study and improve knowledge about agriculture development in Japan. We are happy and impressed in SAKURA Exchange Program. Japanese are kind and helpful. And they organize well during our stay in Japan, but the time is short. Maybe 2 or 3 weeks would be better for next year.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

My observation is that the young NAFRI staffs need to research agriculture about rural agriculture development in upland, soil improvement, marketing and analysis of the agricultural problems.

Finally I would like to thank you very much to JST, Nagoya and Kyoto University for providing exchange opportunity and supporting this program. It no doubt brought a huge influence on my life. I highly recommend for NAFRI staff to take this exchange program, because after that you will find yourself different. I hope this program continue every year to help young NAFRI staffs.

Mr. Souksavanh SENGDAHEUANGHOUNG

Personal Information

Name: Souksavanh SENGDAHEUANGHOUNG

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Male

Age: 28 years old

At first, I would like to say thank you to everybody who supports this program and gave me the opportunity to visit Japan. As I know Japan is one of the most modern countries in the world, especially for the Electronic System and Fashion. Japanese have freedom to choose their own different lifestyles. Therefore Japan is the most interesting country for me.

What can you learnt from this program?

When I was in Japan on SAKURA Exchange Program, I was touched by many things such as Japanese culture in their daily life. They are polite, considerateness and regulation which are too difficult to find in the modern country. But I really found them in Japan.

Moreover I could access to their livelihood sharing from the people in the rural area with their warmth and kindness. Especially they supported me to know and understand about how to do the agriculture without chemical, forest management and the activities of community sharing at TOYOTA Farm. In addition, this program was able to make me know more about Japan. Because I had an image before that Japanese are not too different from the people in the modern country. But in fact it was not. However, many factors were changed. The Japanese still protect their good livelihood like they want.



How to apply your experience of this program into agriculture in Laos?

JA is the organization which is established to protect the farmer's right and looks after them. I can apply JA system to the cooperative support in my country.

Forestry management is also the interesting point. At Toyota farm, their management is not only increasing the number of trees but also they focus on how to protect the long benefit, sharing between the environment and the community. Moreover the agricultural product system is very wonderful, because they are not only focusing on the quantity of the productions but also they are producing the best product on their own.

Therefore I apply two main points which I know in this program. "We can buy the trees, but we can not buy the forest". "We can buy the food, but we cannot buy the health". I can apply them into agriculture in Laos.



How you evaluate this program?

The SAKURA Exchange Program in Science is the best program for the young researcher who lacks of the experience of the agriculture research. Because this program has the ideal vision and brings us the key process to do the research. And we are really happy that we received a warm welcome and they took care of us until the end of the trip.

Suggest what kind of activities are most needed when other Lao researcher join this program next year.

In my opinion, this program is not only exchange about research but we can exchange more such as the traditional daily living and capacity building at the community level. One more activity I really need for the next program is learning about agricultural business in Japan. Because nowadays there are many businessmen from other countries who invest in agriculture work in Laos. But Lao's framers are still lack of enough knowledge to negotiate in the business.

Ms. Philavanh BOUTSAVATH

Personal Information

Name: Philavanh BOUTSAVATH

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Female

Age: 38 years old

What can you learnt from this program?

Japanese people are really great teachers of science and technology. This country is really one of the best in the world. When I come to those fields, I have learned many things from this program such as:

- Rice harvest work, I really understand how difficult farming work is.
- Japanese Traditional food such as Mochi, Udon noodle and Rice ball.
- I learned a lot about Agriculture policy in Japan.
- In TOYOTA factory has shown us a lesson about un-stopping efforts and working.
- I learned how workers actually work in the factory by joining the factory-tour.
- I learned how to realize the results by watching the exhibitions.
- I learned a lot about the culture of Japan. And it made me realize how hospitable Japanese people are.
- I've learnt so much, not only technology, but also the way Japanese work.



How to apply your experience of this program into agriculture in Laos?

I will apply my knowledge I learned in this course into my work. I think, Sakura Exchange Program is a very useful program, not only in enhanced understanding between Japan and Asian countries, but also provide participants better knowledge about technology, which can be applied to daily work.

How you evaluate this program?

The itinerary prepared for the program was good. It was well organized and facilitated.

Time is very important for Japanese; they are very strict in terms of their time.

I feel so fortunate to have this opportunity to experience the impressive Japanese culture and advancements.

I was able to have a lot of knowledge in this program. It is really designed according to the objectives and it is very inspiring especially to future researchers.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

In my opinion, all activities are most needed because these will be useful for Lao researchers in the future.

In the end, I'd like to express my highest appreciation for this opportunity to SAKURA Exchange Program in Science.

Ms. Vienghak KEOPHACHAK

Personal Information

Name: Vienghak KEOPHACHAK

Country: Lao people's Democratic Republic

Organization: National Agriculture and Forestry Research Institute (NAFRI)

Position: Researcher

Sex: Female

Age: 28 years old

What can you learnt from this program?

I learned and discover Japan in SAKURA exchange program in science. That was very useful and interesting program to enhance the young NAFRI staff personal development and to learn Japanese society and Japan's advanced technology.

On farm in rural area, I really enjoyed developing the ideas through our talk to host family about the rural society culture and lifestyle of Japan. I am very thankful to the assistance for their human quality and their professionalism. I have learned and discovered the process of rice production, organic farming of vegetable, planting, caring for forests, management of growing timber and I made Japanese food, helping by host family, such as Mochi from sticky rice, Oudong (Noodle). The other day I twisted the Shimenawa rope ring for head at shrine. I also had a chance to dress Japanese Kimono. It was a unique and happy experience for me.

Agriculture-Tour is one alternative for improving incomes and potential economic viability. Farm stay includes agricultural study tour like planting or harvesting, providing you with refreshing change of pace. And visitor comes, relax and enjoy in the farm stay programs, leaning what farm life is all about.

We visited Toyota Motor and Toyota Museum, and explored many wonders of cars taking 130 minutes, seeing how cars are assembled and welded. Staff offered behind-the-scenes look at the making of a legend.

Vegetable Factory and Suntory Beer's Factory were fascinating guiding us step by step through the special glass enclosed observation gallery that looks down on the



production process from beginning to end. A wall display of the company history enhanced my understanding. Japan exports goods and industrial products like Cars, Television and Farm machine. Mastery high technology has helped Japan advance technologically powerful economy in the world.



How to apply your experience of this program into agriculture in Laos?

I will apply my experience learned from this program into effective use in the agriculture sector in Laos, introducing the machine in the field of agriculture to reduce labor and time. And organization for agriculture like JA provides the financial and technical support to smallholding farmer of investing and making funds, consisting of producer and consumer, to buy machines for safe and stable food supply, and farmer can rent machines from that organization. Although most farmers are lack of negotiation skills to avoid the disappointing result. However, farmers are proud people. They certainly are not afraid of hard work and getting dirty. They strive to become good business negotiators. I believe that in the future Laos became modern agriculture country and farmer lives happy in rural area getting high income.

How you evaluate this program?

This program was organized very well for the young staff and gave more knowledge and experience through a coherent program. I was excited to know the development of Japanese agriculture. Japan has very good custom and tradition and we could chance to learn how to cook Japanese food. Japanese people are lovely and warm welcoming to us for 10 days. Finally all program activities are so important for us to develop ideas for our works in the future and I feel greatly thankful in this program.

Suggest what kind of activities are most needed when other Lao researcher join this program next year

All activities in the field agriculture are most needed and important for Lao researcher. Especially, rice research, vegetables research, livestock research are really good program next year.

Finally, I would like to thank you for JST, Nagoya University and Kyoto University invaluable assistance during my stay in Japan and appreciate these opportunities. I hope this program continues next year to support the young NAFRI staffs.

4. Itinerary

	Date	Time	Activity	Place
Day 1	Thu, 1 Oct.	9:30	Arrive at Tokyo Narita Airport, (Flight VN0310)	Narita airport
		10:30	Orientation	Tokyo office
		12:30	Arrive at hotel and leave baggage	Hotel Marutani
		13:00	Lunch	
		14:30	National Museum of Emerging Science and Innovation	Daiba
		17:00	Back to hotel and check in	Hotel Marutani
		17:30	Get together on the hotel lobby and go to dinner	
Day 2	Fri, 2 Oct.	7:00	Breakfast	
		8:30	Meeting	Tokyo office
		9:30	Lecture: -Agriculture and Agricultural Policy in Japan -Role and Function of Japanese Agricultural Cooperative	Norinchukin Research Institute Co., Ltd.
		12:00	Lunch	
		13:00	Tokyo Bus tour	
		14:00	From Tokyo to Toyota by bullet train and bus	
		18:00	Arrive at Itadori Villa, Toyota	Itadori, Toyota
Day 3	Sat, 3 Oct.	7:00	Breakfast	Itadori, Toyota
		9:00	Meeting	
		10:00	Rice Harvest with local people	
		12:00	Mochi-tuki and Lunch	
		14:30	Making Shimenawa at Shrine	
		16:00	Dry rice, Shelling	
		17:30	Dinner	
Day 4	Sun, 4 Oct.	7:00	Breakfast	Itadori, Toyota
		9:30	Meeting and lecture	
		10:00	Teuchi- Udon (Homemade noodle)	
		12:00	Lunch	
		14:00	Organic Farming, Cultivator	
		17:30	Dinner: Barbecue with local people	
		19:00	Sing and dance with local people	
Day 5	Mon, 5 Oct.	7:00	Breakfast	Itadori, Toyota
		8:30	Making rice ball for lunch	
		9:30	Tinning of man-made forests	
		12:00	Lunch	
		13:30	Hatchet	
		16:30	How to wear Kimono for women	
		18:00	Dinner: Barbecue with local people	

	Date	Time	Activity	Place
Day 6	Tue, 6 Oct.	7:00	Breakfast	Itadori
		9:30	Toyota Plant tour and Toyota museum	Toyota plant
		11:45	From Toyota to Nagoya by bus	
		12:30	Lunch	Nagoya University
		13:30	Lecture	
		18:00	Dinner	Miyuki station hotel
Day 7	Wed, 7 Oct.	7:00	Breakfast	Miyuki station hotel
		9:00	From Nagoya to Kyoto by bullet train	
		11:00	Lettuce Plant tour	Kameoka city
		12:30	Lunch	
		14:30	SINTORY Plant tour	Nagaoka city
		18:00	Dinner	The Palace side hotel
Day 8	Thu, 8 Oct.	7:00	Breakfast	The Palace side hotel
		9:00	Preparation for Presentation	CSEAS
		12:00	Lunch	
		13:00	Preparation for Presentation	
		18:00	Dinner	The Palace side hotel
Day 9	Fri, 9 Oct.	7:00	Breakfast	The Palace side hotel
		9:00	Preparation for Presentation	CSEAS
		12:00	Lunch	
		14:30	Presentation	
		18:30	Dinner	The Palace side hotel
Day 10	Sat, 10 Oct.	7:00	Leave hotel	
		10:30	Return to Laos (Flight VN0321)	Kansai airport

5. Review Comments

How to foster the next generation leaders of Lao PDR

KONO Yasuyuki
Center for Southeast Asian Studies,
Kyoto University

The economy of Laos had been subsistence oriented. Spread of market economy was limited only at the major cities such as Vientiane, and trading in rural provinces were dominated by daily consumption goods of local people until the early 1990s except for few kinds of non-timber forest products such as benzoin, perfume material exported to Europe. The situation has been, however, drastically changed since then. Cintanakan Mai and consequent economic reform, infrastructure development and open-door policies to neighboring countries provided both positive and negative impacts not only to urban cities but also to rural communities.

The major issues arise by these changes in rural areas are as follows. First, labor migration was accelerated. Subsistence number of rural population, particularly those who are in the 20s and 30s, are looking for high-income off-farm jobs outside the country. This causes labor shortage and unbalanced demography. Second, commercial cropping is expanding. Major crops are maize, rubber and various kinds of fruits and vegetables. This provides a livelihood option of high-risk and high return, and the both cases, successful and failure, happen, results in the transformation of rural community from homogeneous to socio-economically diversified society. These changes threat subsistence production and food security at the national level. Third, the investment to land by the private sector is encouraged through land concession. These include for food and industrial material production, energy industry and mining. This causes frequent conflicts among the private sector, local administration and local residents.

These are the currently important agenda of NAFRI. As all of them were induced by the fundamental social and economic transformation of Lao society, these cannot be solved quickly and should remain to be major agenda of NAFRI in the next generation. The next generation leaders of NAFRI, therefore, must take initiatives to manage these agenda. Then,

what should be their qualification? First, they have to be familiar with modern science and technology. Labor shortage and scarcity of land resources were overcome by mechanization and intensification of land use through application of modern technology which was the major tool in developed countries and expected to be so Laos too. Second, they have to be able to apply modern science and technology appropriately. What is "appropriately"? This question is difficult to answer, but we cannot expect successful implementation of modern science and technology without seriously considering about this point. It must be something enhancing the economy at the national, local and household levels without crucially deteriorating security at all levels, deteriorating natural environment, and destructing ecosystems. For this, next generation leaders should have wider scope and knowledge on society and nature and deep insight combined with flexible mindset for future.

In the SAKURA program, what kinds of occasion should the Japanese side provide? Actually, what the Japanese society is confronting is something similar to what I mentioned above. In short, we are confronting to the unpredictability and complexity. We have to tackle with problems which do not have single and universally applicable answer. The Japanese societies, including policy-makers, researchers, private sector and people, manage to overcome their problems. What is most important for the next leaders of Laos is to learn such process that people collaboratively work, repeat tries and errors, negotiating each other and make efforts within each capacity, I believe.

I sincerely hope that the participants of SAKURA program learned more than what we expected them to learn through this invaluable occasion.

Comments for Sakura Training Course

HYAKUMURA Kimihiko
Institute of Tropical Agriculture,
Kyushu University, Japan

Although only ten days' youth exchange program, it has greatly value experience for Lao Sakura participants including visiting Japan Agricultural Cooperative, beer processing company, Toyota plant, Toyota museum, Toyota Forest, Toyota Farm and class room lecture / discussion in both Kyoto University and Nagoya University. I recognized that this program could provide various useful opportunities of observing Japanese agriculture, technology and culture for them.

As Lao participants already understood, both Japanese and Lao people have different pre-condition in terms of natural, economic and social condition in both countries. Generally we think Japanese agricultural system have some advantages comparing with Lao systems. Since Japanese system sometimes may include not only advanced systems, but also complicated process, it may be difficult to apply Lao system directly. When we consider natural, economic and social condition in Laos, we found out both country may have appropriated way based on current conditions.

Lao participants recognized that aging society in rural area of Japan poses big challenges in terms of successors of farms. And these challenges may be occurred in Laos in near future, after economic development. This is good e for participants to think future of their own country.

In the final presentation of this training course, all of participants worked hard to make presentation in English language. It is very good experiences for them to spear in English in front of several audiences. In contrast, during the general discussion, a limited number of participants expressed their own thought. I imagined that many participants may have limited speaking in English. But I would encourage them to make a good effort in the future, even if they feel their language skills are limited.

Appendix 1 Activity Reports

Ms. Latsamy PHOUNVISOUK

Agricultural co-op association System in Japan and Laos

In order to improve agricultural co-op association system management

↓

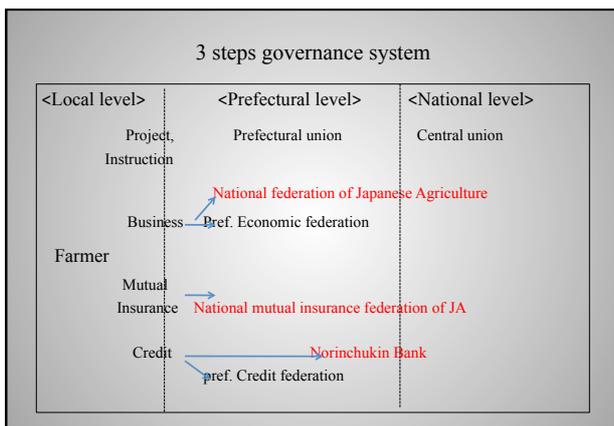
Organizing Farmers

- Joint-purchase of agricultural materials
- Joint-marketing of agricultural product
- Improvement of bargaining power, etc

1. Examples of Agricultural Cooperative in Japan

1947 Establishment of Agricultural Cooperative in Japan

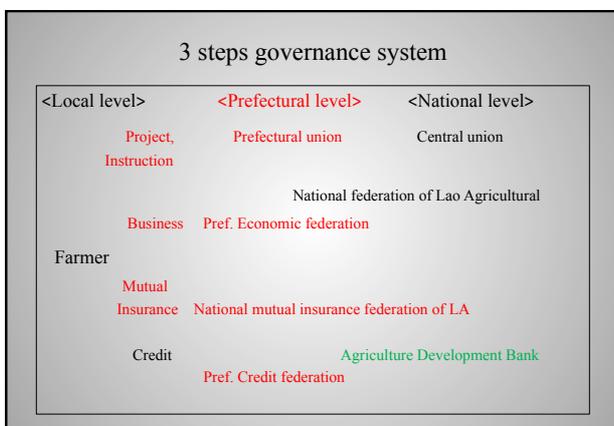
- Characteristics of Japanese Agricultural
 1. **Multi-purpose agricultural cooperative**
(instruction for farming, supply of agricultural materials, marketing of agricultural product, credit, mutual insurance, regional development, welfare service, etc)
 2. **Almost every farmer is member of Japanese Agricultural**
(Almost every farmer is member of Japanese Agricultural and they use Japanese Agricultural is various services in addition, non-farmer also can be “associate member” and can use Japanese Agricultural services
 3. **“3 steps governance system”**



1. Examples of Agricultural Cooperative in Laos

1975 Establishment of Agricultural Cooperative in Laos & extinction (1985)

- Characteristics of Lao Agricultural
 1. **Multi-purpose agricultural cooperative**
(instruction for farming, supply of agricultural materials, shop of agricultural product (office), credit, mutual insurance, regional development, welfare service, etc)
 2. **Almost every farmer is member of Lao Agricultural**
(Almost every farmer is member of Lao Agricultural and they use Lao Agricultural is various services in addition, non-farmer can not be “associate member” but can use Lao Agricultural services
 3. **“3 steps governance system”**



2.Examples of JA’s and LA’s Activities

Management of Vegetable Sorting Facility of JA

- Farmers bring their vegetable to JA project
- Classifying the quality of vegetable in sorting facility
- Shipping vegetable responding to its quality or grade




Management of Vegetable Sorting Facility of LA

- Farmers bring their vegetable to the shop of MAF
- No classifying the quality of vegetable in sorting facility
- No shipping vegetable responding to its quality



3. Examples of JA's and LA's Activities

Management of Farmer's Market in Japan

- Farmers market mainly local foods and agricultural materials
- Activity supports local food consumption and farmers income

No Management of Farmer's Market in Laos

- The shop of LA's mainly nation food and agricultural materials
- Activity supports nation food consumption but not farmers income

4. Examples of JA's and LA's Activities

Land reforms in Japan

- Land of the Royalty → farmers land
- Farmers have land and become the member of JA

Land reforms in Laos

- Land of the Laos government → farmers land
- Lao farmer have agriculture land

(land reforms were implemented during the 1990s based on a premise that they would overcome many constraints delimiting the pace of rural development and sustainability of livelihoods)

Conclusions

- I have improved understanding & skills on JA (JA have developed its position and function (farmers in rural area happy and become rich
- I don't have opportunities to learn with farmers of JA
- Small farmers of Lao has no agriculture land
- They sale their land to company (Businessman) for rubber, banana, rice and vegetable)
- Lao's farmers in rural area become poor and poor

Recommendations

- In the future I would like to come and learn about Japanese Agricultural co-op association in Japan
- Laos agricultural co-op association was Extinction in 1985 (land reforms were implemented during the 1990s)
- I would like to organic about agricultural co-op association in rural area again (Luang namtha province)

Mr. Invanh KANNALY



Group A

Comparison between Suntory Beer of Japan and Lao Beer of Laos

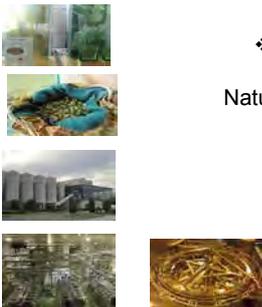
By Invanh KANNALY

Laungnamtha agriculture research center

Outline of presentation

- Suntory Beer's Production
- Lao Beer s Production
- Different between Suntory Beer and Beer Lao
- results

Suntory Beer's Production



❖ **Process Product of Suntory Beer:**
Natural water, Bary and Hops

Lao Beer Production



❖ **Process Product of Lao Beer:**

1. Ground water, Rice (kao CR203, kao kai noy)

Suntory Beer's Production

Japan



Laos



Packaging of Lao and Japan before shipping to the market

Different between Suntory Beer and Beer Lao

	Beer Lao	Beer Suntory
Material	Rice (Kao CR 203, Kao Kai Noy) Ground water	- Barley - Hops - Nateral eater
Taste	Pretty sweet	Strong taste

Results

Tasty of the Beer quality

Japan



Laos



Ms. Philavanh BOUTSAVATH

Visiting at TOYOTA Museum and Plant tour in Nagoya on 6th October 2015

Group A
By: Ms. Philavanh Boutsavath

Contents

1. Visiting at TOYOTA plant tour
2. Visiting at TOYOTA museum
3. Conclusion of visiting

1. Visiting at TOYOTA plant tour

- ❖ The manufacturing plant was so high tech and organized
- ❖ Production process:
 1. Tamping
 2. Welding
 3. Painting
 4. Assembly

Welding



- The welding plant was more automated
- Perfectly coordinated

2. Visiting at TOYOTA museum

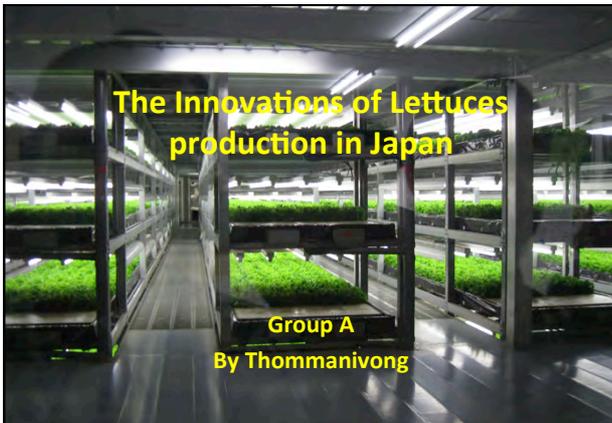
- This function is to display newest automobile/vehicle model



3. Conclusion

- TOYOTA is one of the biggest automobile companies in the world.
- Visiting to TOYOTA factory has shown us a lesson about un-stopping efforts and working
- We could learn how workers act in fact by joining the factory-tour and
- We could learn how to realize the results by watching the exhibitions

Mr. Thommanivong PHENGTHILATH



Vegetable production factory

In the spread has high technology to use lettuce production because of environmental control system so have good for beauty health and shorten successes cultivation from 42 days

Vegetable Factory

- Water saving
- Lighting control
- Air conditioning technology

Details of vegetable factory (start in 2016)

Product	lettuce
productive	30,000 heads/day
Initial investment for 30000 heads production	US\$ 10 million (\$1=JPY 120_)
Power consumption for a head	1.20 kw
Water consumption for a head	0.11L

The contraction of food infrastructure

The feature of out lettuces

Comment

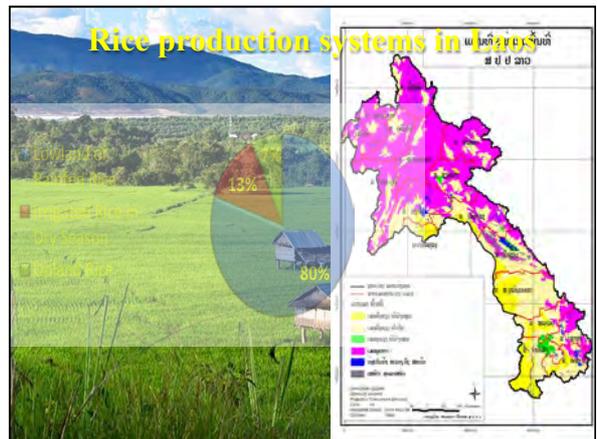
- In the future I would like to come and learn this technology
- Hope Lao people will be like to eat this kind of vegetable because good quality and healthy
- In the future I need this vegetable factory come to visit Laos
- Laos has a good land, water and dam hydropower electricity and low labor

Mr. Banthasack VONGPHUTHONE



Rice Production Between Lao and Japan

	Lao (2014)	Japan (2013)
Area (ha)	800,000	-
Production (Ton)	4.2 million	8.6 million
Yield (T/ha)	3-4	-
Methods	By hand	Machine
Problems	Limitation of technologies, adaptation, infrastructure	High technologies, good infrastructure
Kg per year	250	50



Visit Toyota farm (Rice harvest activity)

- On 3 October in the morning we joined the rice harvest experience of Toyota city. My observation is this area the first they using farm machinery for save the labor and the second Agriculture-Tour(Learning by Doing) some practices in rice production such as: Planting to Harvesting and relax.
- In evening we visited rice mill of community



Conclusion and Knowledge

1. Farm machinery will apply agriculture and development of Laos
2. Agriculture-Tour(Learning by Doing) in Luangprabang province because heritage city
3. Ongoing Rice seed Research in Japan for good quality rice and in Laos Rice seed Research for quantity



Mr. Souksavanh SENGDAHEUANGHOUNG

Forestry



Group B
By : Souksavanh Sengdaheuanghoung
Assistant Researcher of Agriculture Policy

Content

- Introduction
- Forestry management
- Recycle product from wood
- Comparason between forest in japan and Lao

Introduction

- Location : TOYOTA Fram
- Age : 40 years old
- Variety of the tree : Pine tree and Bamboo

The management system is not only protect and increase the forest area



The management and protection must be friendly with the envelopment.



The most important factor of the Forestry management system is The benefit sharing



Transfrom the wood



Comparason between forest in japan and Lao



Thank You for your attention

Ms. Tounglien VILAYPHONE

Comparison between the framers in the rural area in Laos and Japan



Japanese framers at Asahi community

- Knowing manipulation techniques in vegetable
- good management
- Can grow vegetable in the winter
- The framers in Japan can buy agricultural equipment to use on the farm

Lao farmers work on farm



Lao farmers work on farm



Seed collection by framers in Laos



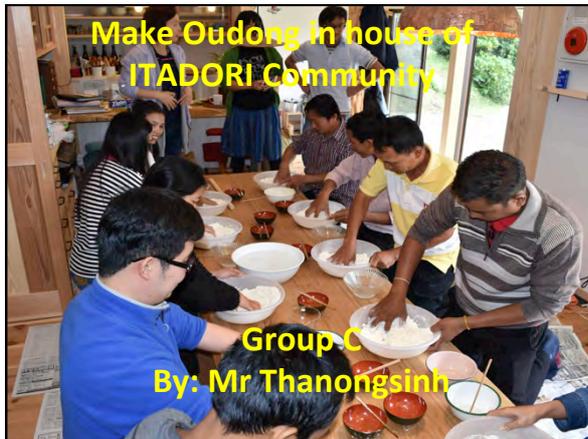
Marketing

- After framers Consumption they Sales to market
- But now Laos have the Organic market in Vientiane Capital 2 day/week
- In Japan they Will Send the Organic produce to the buyer have Register to the Organic farm

Marketing in Laos



Mr. Thanongsinh DENGKHOUNXAY



Oudong Story

- Oudong is one kind of noodle from Japan. Mostly Japanese people like to eat noodle when they eating noodle style have a voice like delicious (Osishi)
- In Laos we have one kind of noodle similar oudong we call Sen kao pie



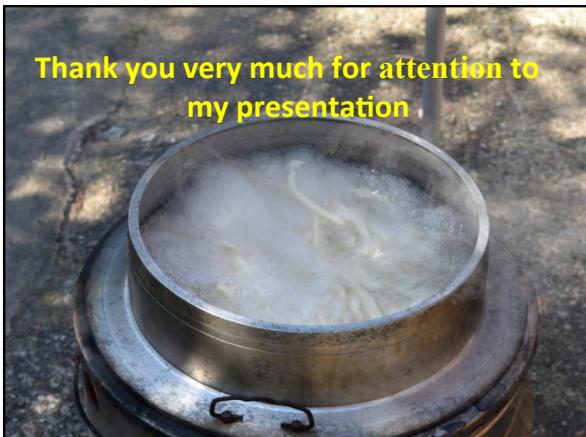
Process oudong

- First step we boil water
- Second step very important we use the hand for threshing powder with water.
- Third step we being oudong boil in hot water than take out to cool water for soft noodle
- Finally we prepare and eat.

Photos process oudong



Thank you very much for attention to my presentation



Ms. Vienghak KEOPHACHAK

SAKURA Exchange Program in Science International Workshop of Capacity Building for Agricultural Development in Laos

Topic of presentation: Why do they make Mochi ?

Group C

At Kyoto University

Date: Monday 9th October, 2015

Ms. Vienghak KEOPHACHAK

Why do they make Mochi ?

Mochi is a Japanese confection, found usually in the shape of a small, round rice cake which can be eaten with condiments such as roasted soy bean flour, sweet red bean paste, soy sauce dip and seaweed. In Japan like to do Mochi especially before the new year and It's also the harvest season so Mochi is the one of the food to use on the opportunity to celebrate the Japan new year.



After the rice harvest season Japanese still take some rice straw to tie for making rice the crown to wear on their head. The crown from rice straw is the marker to mean that the farmer already gotten harvest. Moreover Japanese still believe the rice straw crown can protect the bad spirit.



In Lao P.D.R we still make the desert look like Japanese Mochi, especially Mong ethnic group. They make pappha (look like Mochi) on their New year. But for the Mong ethnic group they celebrate their New year from December to January depend on their traditional calendar.



Thank you very much for your attention

Mr. Noulay KEOMANY



Memory on 5 October

- Last day in Toyota farm the Lao and Japanese people we was cooked many kinds of food such as (Lram kai, soup or tom yam and egg plant and tomato sauce
- But today I would to present one kind of food (Lram kai) made from chickens
- Lram is Lao food name the meaning for Lucky and success, Mostly Lao people they make Lram in the party such as: celebration, meeting, house-warming party, birthday party, etc



Conclusion about Japanese and Lao

- After our dinner we have Lamvong (Lao dancing) and sing a song together
- Every Japanese who come to join with us they was happy ending in the party.
- Especially Lao women has a good oppotunity take photo by using KIMONO



Appendix 2 Lecture Materials

Agricultural and Agricultural Policy in Japanese

Agriculture and Agricultural Policy in Japan

2015.10.2

Norinchukin Research Institute
Tetsuro Shimizu

1



Mt. Fuji
3,776 m



Tokyo
10 million people

3

[Japan]



Area
378 thousand km²
(Laos 237 thousand km²)

Population
126 million
(Laos 7 million)

4 Main Islands

2



Kyoto
Ancient city
1,200 years old



Rural Area

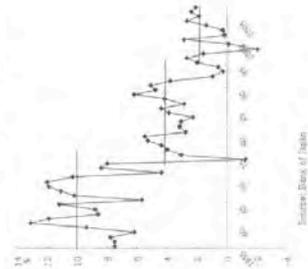
4

1. Economic growth and agriculture in Japan

History of Japanese economy

1867	Meiji revolution
1945	End of World War II → Democratic reform
1947-49	Land reform
1955	Join the GATT
1955-73	High Economic Growth
1961	Agricultural Basic Law
1973	Oil Shock
1985	Plaza Agreement → 150 Yen exchange rate
1985-94	GATT Uruguay Round
1995	New Agricultural Basic Law
2001-	WTO Doha Round

Economic growth rate of Japan (GDP)



Source: Bank of Japan

6

During the economic growth, many people moved from rural area to big cities

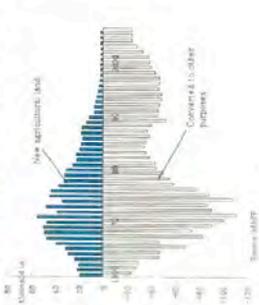
Flow of population into big cities



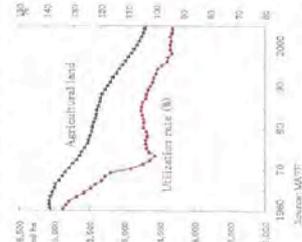
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A lot of agricultural land were converted to other purposes, and it decreased

Construction and Conversion of agricultural land



Agricultural land and utilization rate

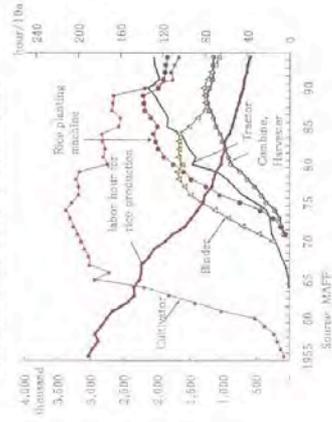


Source: MAFF

7

Cultivation, Planting and Harvesting was mechanized, and labor productivity has increased much

Diffusion of agricultural machineries



Source: MAFF

8



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12

Income of farmers has increased Comparison of Income

(Unit: million yen)

	1965	1975	1985	1995
Members	A	5.3	5.6	4.3
Worthwhile	B	2.7	2.6	2.5
Income	C	83.5	3,997	8,928
Share of Agricultural Income	D	366	1,166	1,402
Share of Agricultural Income per member	E/A	42.7	29.9	15.4
Share of Agricultural Income per worthwhile member	F/B	155	97.0	1,588
Share of Agricultural Income per member	G/A	8.1	2.9	3.8
Worthwhile of other industries	H	2.8	1.6	1.7
Income	I	797	2,897	5,388
Income per member	J/A	154	160	1,213
Members	A	128	120	115
Worthwhile	B	176	170	157
Income	C	105	137	129
Income per member	D/A	82	114	111

Source: MAFF
(*) Income of Farm households (n=16)

As a member of GATT, Japan liberalized trade

Process of trade liberalization

Year	Liberalized commodities	Number of commodities under import restrictions
1953	Removes a number of GATT duties	
55	Eliminates duties on 100 commodities	
57	Policy report for the trade liberalization	
62	Removes duties on 100 commodities	
63	Removes duties on 100 commodities	
64	Removes duties on 100 commodities	
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01	Removes duties on 100 commodities	
02	Removes duties on 100 commodities	
03	Removes duties on 100 commodities	
04	Removes duties on 100 commodities	
05	Removes duties on 100 commodities	
06	Removes duties on 100 commodities	
07	Removes duties on 100 commodities	
08	Removes duties on 100 commodities	
09	Removes duties on 100 commodities	
10	Removes duties on 100 commodities	

Pattern of Japanese Food consumption has changed

Net Food Supply per person

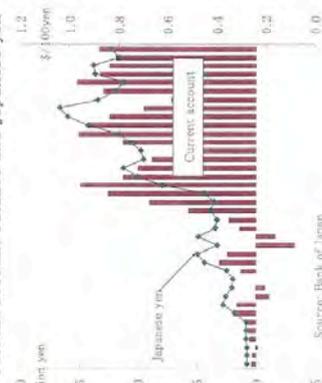
(Unit: kg, %)

	1960	1980	2005	1953/1960	2005/1980
Rice	114.9	76.9	61.4	▲ 31.3	▲ 22.2
Wheat	26.6	32.2	31.7	▲ 4.8	▲ 1.6
Potatoes	39.5	17.3	19.9	▲ 43.3	▲ 5.0
Pulses	16.1	8.3	9.3	▲ 15.9	▲ 9.4
Vegetable	99.7	118.9	96.2	▲ 3.3	▲ 14.9
Fruit	22.4	28.8	43.1	72.2	11.1
Meat	5.2	22.5	26.5	332.7	26.7
Egg	6.3	14.3	16.6	127.0	16.4
Milk	22.2	65.9	92.0	194.1	10.9
Fish	21.6	24.8	24.4	25.2	▲ 1.1
Sugar	15.1	23.9	19.9	37.0	▲ 16.4
Oil and Fat	4.3	12.9	14.8	193.0	15.9

Source: Food Supply and Demand

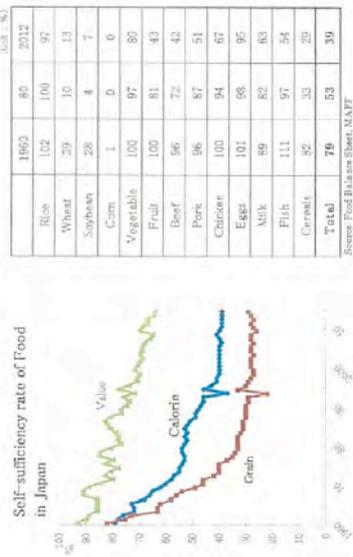
Japan export much industrial goods (cars, TV etc), then Japanese Yen became strong

Current account balance and Japanese yen



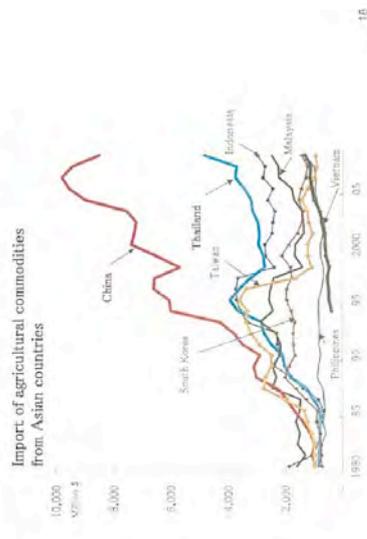
Source: Bank of Japan

Japan imports much food.
Self-sufficiency rate of food has declined

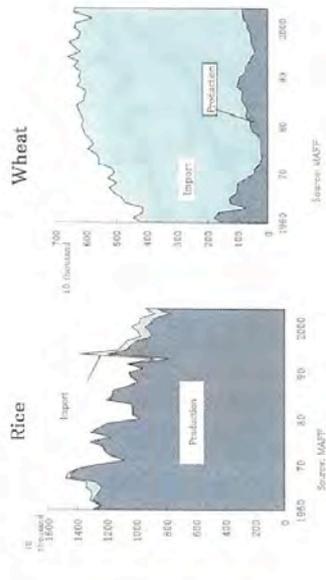


17

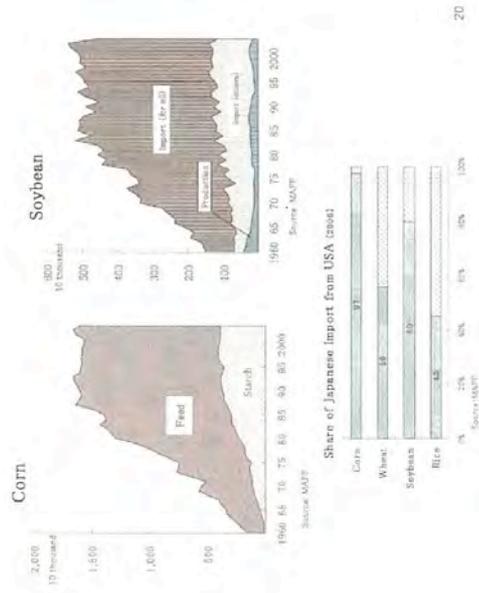
Japan imports much food from Asian countries, especially from China



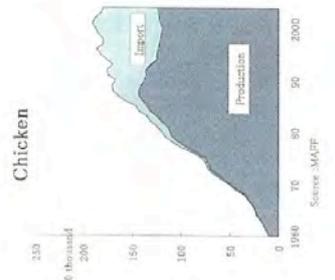
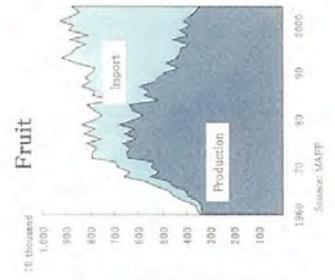
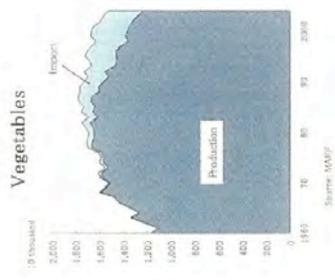
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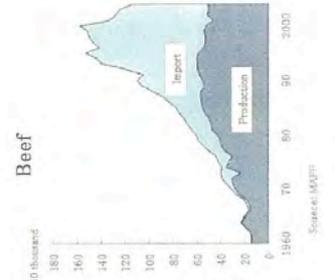


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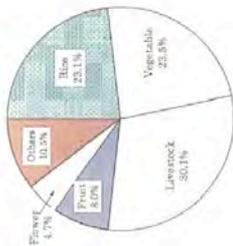


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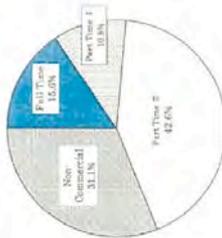
2. Agriculture in Japan

Gross Agricultural Output

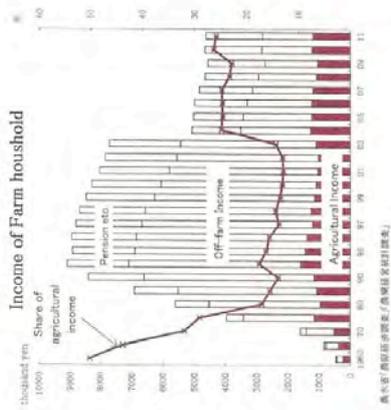


Source: Statistics of Agricultural Households

Types of Farm household



Source: Reports of Annual Sample Survey of Agriculture



Farm households and farmers

(Unit: 100thousand, ha, %)

	1960	1990	2000	2010	10/00
Farm households	666	465	312	253	▲ 18.8
Family members of farm households	3,441	2,137	1,047	650	▲ 37.5
Members per household	5.7	4.6	4.5	4.0	[▲ 0.4]
Farmers ①	1,456	697	383	201	▲ 32.9
over 60 years old (A)	17.5	35.8	65.9	73.8	[7.6]
Farmers ②	1,787	1,254	688	454	▲ 33.8
over 60 years old (B)	15.5	23.9	43.6	51.4	[7.8]
Cultivated land	607	546	453	459	▲ 5.3
Cultivated area per household (sq)	1.00	1.17	1.55	1.82	[7.4]
Usage rate of land (%)	133.9	104.5	94.5	92.1	[▲ 0.4]

Number of farm households by size

(Unit: 10thousand, %)

	1960	1990	2000	2010	2010/00	
Other Area	- 0.0%	2,275	1,321	1,223	▲ 0.7	
	0.5~1.0	1,937	1,204	813	52	▲ 31.8
	1.0~2.0	1,003	389	392	112	▲ 28.6
	2.0~3.0	231	240	152	134	▲ 26.1
	3.0~5.0	24	82	99	85	▲ 15.1
	5.0%+	2	13	43	55	▲ 28.5
Total	5,833	4,542	2,020	1,476	▲ 18.6	
Per unit (sq)	5,118	5,211	3,546	3,037	▲ 1.7	
	6.88	6.95	1.20	1.39	(6.1)	
Household	- 0.0%	17%	02	27	13	▲ 31.3
	0.5~10.0	47	30	13	7	▲ 69.4
	10.0~20.0	11	16	13	9	▲ 27.7
	20.0~30.0	9	13	7	8	▲ 31.8
	30.0%+	9	13	11	11	▲ 6.0
	Total	238	120	70	51	▲ 26.8
Per unit (sq)	393	1,140	1,115	1,186	▲ 3.4	
	4.06	9.20	10.94	12.58	▲ 13.2	

Structure of livestock sector

Sector	Unit	1990	1996	2000	2010
Dairy cattle	farms	410	115	34	22
	head	82	209	176	148
	per farm	2	18	53	68
	farms	2,032	364	117	74
Beef cattle	head	234	216	292	289
	per farm	1	6	24	29
	farms	1,000	799	141	12
	head	1,000	192	1,000	951
Pigs	per farm	2	71	838	1,531
	farms	3,839	218	5,3	3,9
	head	5,465	12,277	14,037	13,863
	per farm	1,4 head	0,6	28,7	46,7
Broilers	farms	-	9	3,1	2,4
	head	-	12,864	10,841	10,714
	per farm	-	14,2	28,7	44,8

Source: Livestock Statistics

Structure of livestock sector has improved much





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3. Agricultural Policy in Japan

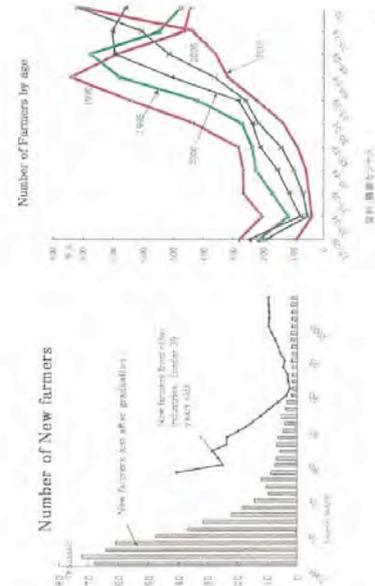
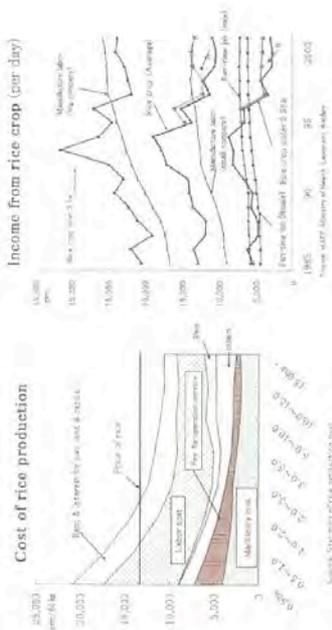
Agricultural Policy played a big role in the development of Japanese agriculture, and succeeded for farmers to adjust the economic growth

[Main Objects of agricultural policy]

- ① To ensure the development of agriculture
- ② To raise the status of farmers

[Aims and Measures of agricultural policy]

- ① Increase of selective products
- ② Increase of productivity

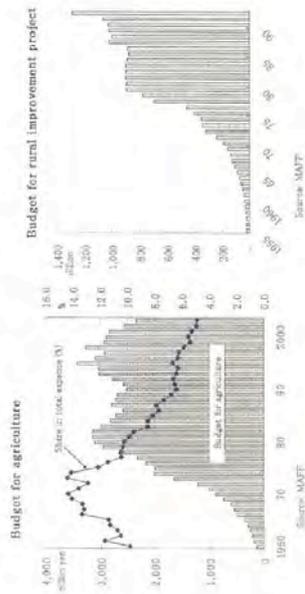


- (continued)
- ③ Improvement of agricultural structure
 - ④ To rationalize agricultural marketing and increase processing of agricultural products
 - ⑤ To stabilize prices of agricultural commodities, maintain and improve agricultural income
 - ⑥ To rationalize production and marketing of agricultural requisites (fertilizer, pesticides, machines) and stabilize their price
 - ⑦ Training of farmers for modern farm businesses
 - ⑧ To improve welfare of farmers

[Content of agricultural policy]

- ① Production policy (technology, extension etc)
- ② Land policy (land law, land improvement etc)
- ③ Marketing and distribution (wholesale market etc)
- ④ Price support policy
- ⑤ Insurance against disaster and pension system
- ⑥ Agricultural finance
- ⑦ Structural Improvement Policy
- ⑧ Trade policy for agricultural products
- ⑨ Policy for agricultural organizations
- ⑩ Rural Development policy

Budget for agriculture increased much until 1980



Outline of budget in Japan

Central government	Total budget A				
	1970	1980	1990	2000 / 2000-00	
Local government	Prefectures	5.9	24.9	43.5	53.4
	Cities, towns	4.9	24.4	36.7	51.2
	Total (A+B)	8.8	45.6	78.5	97.6
Total	14.6	71.0	126.1	168.9	
GDP	75.3	245.8	456.1	572.0	
Budget/GDP	16.7%	28.9%	26.7%	31.8%	

Source: Ministry of Finance
(B) exclude duplication

Content of agricultural budget

Production	1970				1980				1990				2000			
	43.8	57.7	61.4	66.7	11.9	14.4	15.4	16.4	25.3	27.1	27.4	28.9	3.2	2.9	3.9	4.2
Selected remains	1.9	2.4	2.4	2.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Rural terminals	2.0	2.0	2.0	2.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Technology	3.2	2.9	3.9	4.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Newspaper, extension	1.1	1.3	1.3	1.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Improvement of structure	5.2	6.7	11.4	9.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Agriculture improvement	2.5	2.7	3.1	3.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Land reclamation	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
ATTP (A+B)	1.1	2.8	4.8	3.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Beaver	0.4	1.3	4.2	2.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Price policy	47.1	27.4	34.3	34.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Others	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Budget for agriculture (billions yen)	668	4,108	4,800	4,900	10.8	7.1	8.6	9.3								
Share in total budget	10.8%	7.1%	8.6%	9.3%												

Types of price policy

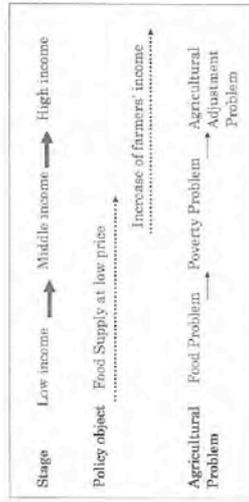
	Production Cost	Factor	Total environment	Demand and Supply	Measures
Controlled price	Rice				Increase by the government
Market (market price)	Wheat for processing		Sweden, Canada		Self-help (farmers, agricultural organizations)
Rice support	Rice	Wheat, Soybean, Sugar, Beef			Increase by the government, Market price
Price stabilization			Wheat, Soybean, Beef		Stabilization by the government
Price for price stabilization			Wheat, Soybean, Beef, Fruit, Milk		Payoff from the funds

Source: ANAF

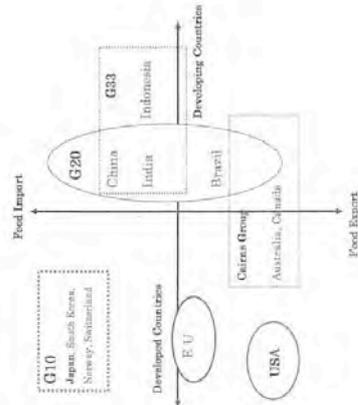
[Evaluation of Agricultural policy in Japan]

- ① Agricultural sector and farmers could adjust to the economic growth and the change of food consumption
- ② Income of farm households has greatly increased and welfare of farmers has improved
- ③ Productivity of agriculture has increased but the structure of rice crop has not improved yet.
- ④ Quality of food improved because of technological innovation and extension service.
- ⑤ Organizations for agriculture played big role in this development. But now, they have become inefficient.
- ⑥ The agriculture sector has suffered from environmental pollution, but it has also negatively affected the environment.

Economic Development and Agricultural Problem



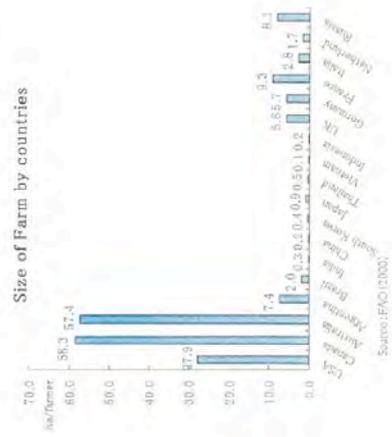
Conflict between Countries



F T A Negotiations of Japan

Country	Negotiation	In Effect
Singapore	2001.1 ~ 2001.10	2002.11
Mexico	2002.11 ~ 2004.9	2005.4
Malaysia	2004.1 ~ 2005.12	2006.7
Chile	2006.2 ~ 2007.4	2007.9
Thailand	2004.2 ~ 2005.9	2007.11
Indonesia	2006.7 ~ 2008.11	2008.7
Brunei	2006.6 ~ 2006.12	2008.7
Philippines	2004.2 ~ 2004.11	2008.12
Vietnam	2007.1 ~ 2008.9	2009.9
ASEAN	2005.4 ~ 2007.11	2008.12
Switzerland	2007.4 ~ 2008.9	2009.9
India	2007.1 ~ 2010.9	2011.8
Peru	2009.5 ~ 2010.11	2012.3
Australia	2007.4 ~ 2014.6	2015.1
DCC	2006.9 ~	
Merchis	2015.6 ~	
Canada	2012.11 ~	
Columbia	2013.9 ~	
E U	2013.4 ~	
RCEP	2015.5 ~	
TPP	2015.7 ~	

Farm size is very small in Asian countries



Appendix 3 Lecture Materials

Role and Function of Japanese Agricultural Cooperative

Role and Function of Japanese Agricultural Cooperative (JA)

2nd. Sep. 2015

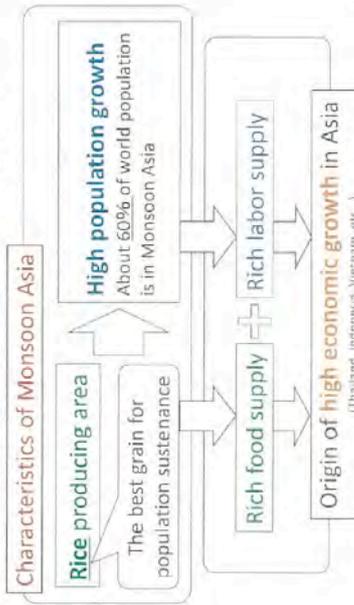
Yukihisa Yamada
Norinchukin Research Institute Co., Ltd.

1

0: Introduction

1. Agriculture and Development in "Monsoon Asia"

◆ Monsoon Asia: Region from South Asia to East Asia



2

0: Introduction

2. Organizing Farmers' Group is strongly needed

◆ Characteristics of Agrarian structure in Monsoon Asia

Rural economy and society are mainly based on **mass volume of "small-scale farmers"**
 ⇒ Their livelihood is quite vulnerable (poverty issue) in contrast to high economic growth in urban area

In order to improve agricultural management

Organizing farmers

- Joint-purchase of agricultural materials
- Joint-marketing of agricultural product
- Improvement of bargaining power, etc...

Examples

- JA in Japan
- HTX (Hợp tác xã) in Vietnam
- KUD in Indonesia
- Microfinance in South-Asian countries

3

1: Summary of JA

Function and System of JA

◆ Brief history of JA (2 organizations as origin of JA)

1. No-kai (agricultural association), established in 1881
2. Industrial cooperative, established in 1890
 - * 1943: Above two organization were unified.
 - * 1947: Establishment of agricultural cooperative

◆ Characteristics of JA

1. "Multi-purpose" agricultural cooperative

Institution for farming, supply of agricultural materials, marketing of agricultural product, credit, mutual insurance, regional development, welfare service, etc.

2. Almost every farmer is member of JA

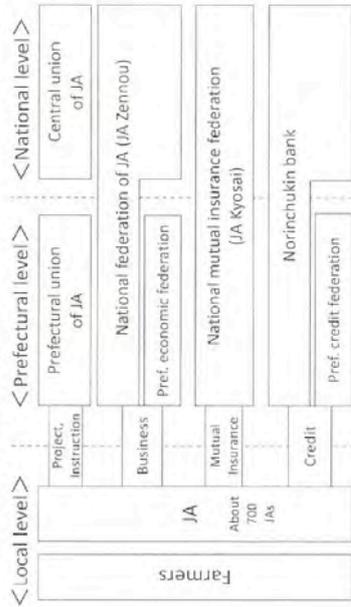
Almost every farmer is member of JA and they use JA's various services. In addition, non-farmer also can be "associate member" and can use JA's services.

3. "3 steps governance system" (Please see next page)

4

1: Summary of JA Governance System of JA

◆ 3 steps governance system



5

2: Example of JA's Activities

2. Management of "Country Elevator"

- Farmers bring their paddy to JA.
- Country elevator can dry paddy and stores it with stable quality.



7

2: Example of JA's Activities

1. JA's Local Office

- The picture below is one of JA's local office.
- There are "farming section", "credit section", "mutual insurance section" etc.. in JA's office.



6

2: Example of JA's Activities

3. Management of Vegetable Sorting Facility

- Farmers bring their vegetable to JA.
- Classifying the quality of vegetable in sorting facility.
- Shipping vegetable responding to its quality or grade.



8

2: Example of JA's Activities

4. Management of Farmer's Market

- Farmer's market mainly sells local foods and agricultural materials.
- It actively supports local food consumption and farmers' income.



9

2: Example of JA's Activities

6. Management of Automobile Retailer

- In rural area in Japan, car is main daily transportation.
- Some JAs have automobile section which sells and repairs cars.



11

2: Example of JA's Activities

5. Shopping Support Service for Elderlies

- There are so many elderlies living in rural area.
- Some JAs deliver commodities for elderlies who have difficulties to go shopping.



10

3: Overview of JA

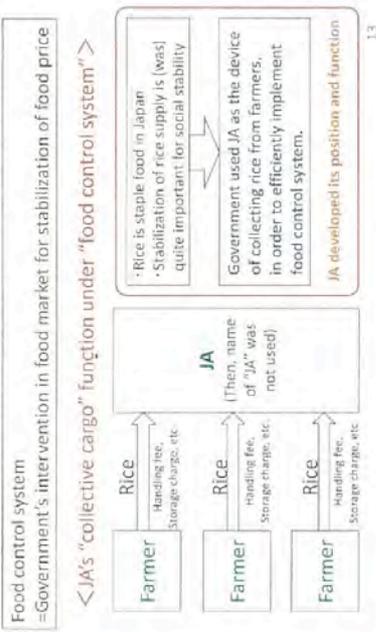
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12

3. The Reason Why JA is Well-Organized

1. Strong Relation to Agricultural Policy

- ◆ Role of JA under "Food control system" during 1942- 1995



13

3. The Reason Why JA is Well-Organized

2. Comprehensive Business System

- ◆ JA's big income source; credit and mutual insurance

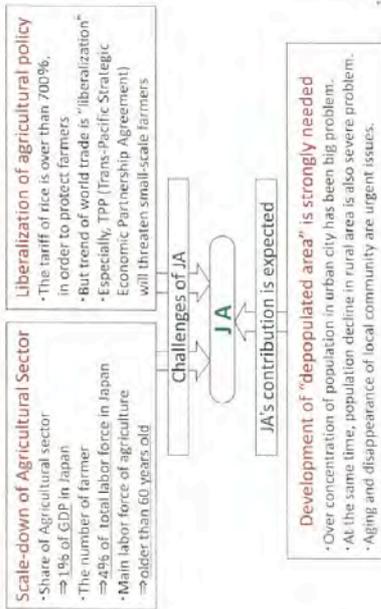


Credit and mutual insurance are the fundamentals of JA's multifunction for rural development

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4. JA's Challenges under Globalization

Scale-down of Agricultural Sector and Liberalization of Agricultural Policy in Japan



15

Reference

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