

FY2017 Inter-University Exchange Project CHIBA University

Support for the Formation of Collaborative Programs with Russian and Indian Universities

【Name of project】(Adopted year: FY2017, (TypeA Russia))

FARM (Future Agriculture with Russian Far east Pre-Master to PhD Program)

【Summary of Project】

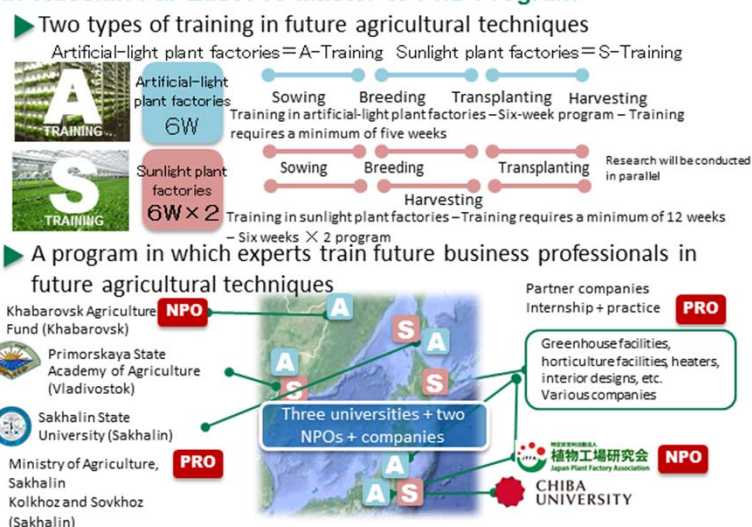
This program trains leaders for future agriculture, which include highly advanced greenhouse horticulture and artificial-light plant factory. Participants learn from diverse fields such as agricultural engineering, food marketing, crop cultivation, and the environmental control. Topics range from food production to distribution and sales businesses. Graduates will possess the skills to contribute to innovations in future agricultural techniques and participate in Russo-Japanese joint enterprises in the Russian Far East. This program is divided into two parts: technological and practical aspects. The first part focuses on the “sunlight plant factories” and “artificial-light plant factories”, because these fields cover the core techniques, including environmental control, cultivation techniques, management, and device development, which will be used in future agriculture. The second part focuses on practical knowledge and necessary skills, including product management, marketing, and life cycle assessments in sunlight and artificial-light plant factories. Throughout the program,

participants are expected to deepen their understanding in engineering, marketing, and fields related to cultivation and environment. These knowledges will contribute to train professionals versed in greenhouse businesses, which is considered to be one pillar of the Russo-Japanese joint enterprise in the Russian Far East.

Future Agriculture with Russian Far East Pre-Master to PhD Program

F A R M

Program to develop business professionals in future agricultural techniques



【Summary of Exchange program】

Interactive students exchanges are promoted throughout the Pre-Masters (sophomore to senior), Masters, and Doctorate programs. The exchange program is composed of two course types: the 6-week A-training on artificial-light plant factories and the 12-week S-training on sunlight plant factories. Both programs are comprised of lectures and exercises related to future agricultural techniques (plant physiology, cultivation management, environmental control, device development, facility management, products management and marketing) as well as internship programs intended for students to acquire skills in cooperation with companies.

【Global Human Resource on the project】

The aim is to train professionals who understand future agricultural techniques, which ranges from food production to distribution and sales, and can contribute to Russo-Japanese joint enterprises in the Russian Far East. As future agricultural techniques, which represents the “next-generation of agricultural diversification (called the senary industry in Japan)” is comprised of the distribution and consumption as well as production processes, global human resources in diverse fields such as horticulture, engineering, management, and marketing are required. In addition, we strive to nurture talent who can promote and manage businesses launched through Japanese and Russian Far East collaborations.

【Feature on the project】

This program has the following four characteristics:

1. Training of specialists in future agricultural techniques in the cold Far East through Russo-Japanese cooperation
2. Development of future agricultural techniques business professionals
3. Training of cutting-edge technologies in artificial-light and sunlight plant factories
4. Two to four opportunities for students to study abroad

【Exchange number】

	2017	2018	2019	2020	2021
Outbound	6	10	14	18	22
Inbound	10	10	10	18	22

1. FY2017 Progress

【 CHIBA University】

【Name of project】(Adopted year: FY2017, (Type A, Country Russia)

FARM (Future Agriculture with Russian Far east Pre-Master to PhD Program)

■ Exchange Programs

In FY2017, we participated in three outbound and two inbound short programs within the framework of the short summer (and winter) programs. Through these efforts, we sent ten students to and hosted ten students from Primorskaya State Academy of Agriculture and Sakhalin State University. In addition, we hosted the Japan-Russia Far East Agricultural Business Forum on the Kashiwanoha Campus, Chiba University in March. Both Japanese and Russian personnel from universities and related companies attended the forum, which aimed to extend business relationships and promote public relations about our exchange programs.



Japan-Russia Far East Agricultural Business Forum

Student-Mobility

○ Outbound

In the FY2017 summer (and winter) exchange programs, we conducted two outbound programs. These programs focused on (1) cultivating, harvesting, and using medicinal plants in the Maritime Territory of Siberia (Primorskaya State Academy of Agriculture); and (2) nature and history in Sakhalin (Sakhalin State University). Additionally, we organized another shorter exchange program that emphasized (3) site tours of greenhouse agriculture in the Maritime Territory and an exchange of opinions on plant production using artificial light (Primorskaya State Academy of Agriculture).

○ Inbound

As for the FY2017 exchange programs, we organized two inbound programs: a three-week program for Primorskaya State Academy of Agriculture students and a two-week program for Sakhalin State University students. These inbound programs extended our summer (and winter) programs. Common program contents included site tours as well as training in artificial-light plant factories and sunlight plant factories. The three-week program also incorporated lectures and exercises on topics such as plant physiology, cultivation management, environmental control, and marketing.

	2017	
	Plan	Results
Outbound	6	10
Inbound	10	10

■ Forming the University Network with Quality Assurance

To maximize the students' performance during the program, participants must attend pre-program and post-program sessions at their home universities. Because this was our first time organizing the inbound programs, we asked at least three faculty members from each institution to participate in order to provide feedback on the program contents and advice for future programs. The lectures proposed under these programs were conducted as part of the Plant Environment Designing Program (P-SQUARE), although we considered offering more basic courses for Russian students.

Participating students must give a presentation in the debriefing session. Then Chiba University evaluates the students, award credits, and issue certificates of completion. We are currently discussing whether the two Russian institutions will also issue certificates of completion.

■ Promotion of Student-Mobility Environment

During the inbound program, an academic staff fluent in Russian and at least one faculty member managed the program. These staff members were dedicated to program organization and sharing information to help participating students learn from a carefully developed education and teaching structure. In addition, tutors and teaching assistants (TA) provided support in areas not directly related to the educational content. For example, they helped participants use PCs and prepare for sessions and training. We have prepared a Japanese, English, and Russian lexicon on protected horticulture for both inbound Russian students and outbound Japanese students.

■ Internationalization of the university, Information disclosure and Publication of outcome

Prior to adopting our exchange programs, we presented our project design to 50–60 Russian participants during the Russia-Japan Agricultural Business Forum held in June. We also presented our project to the 100+ people representing Japanese and Russian companies and universities during the Japan-Russia Far East Agricultural Business Forum in March at Chiba University. While exploring the possibility of developing agricultural businesses with the Russian Far East, we asked the forum participants to consider strengthening cooperation, including receiving student interns. Although we created our website, the URL will not be open to the public until the first half of FY 2018.

■ Good Practices

During the six month period of FY 2017, we organized inbound programs with the Primorskaya State Academy of Agriculture and the Sakhalin State University, and ran pilot internship programs. In partnership with both institutions, we hosted the Japan-Russia Far East Agricultural Business Forum at Chiba University in March. During this forum, we had the opportunity to share our project with the 100+ participants.



On-site training and company tours