

## Panel Discussion

**MC:** Ladies and gentlemen, we will begin the panel discussion. The panel discussion will be chaired by Dr. Toshihiro Senboku, Vice President, JIRCAS. Dr. Senboku, please take the floor.

**Chair (Toshihiro Senboku):** The international symposium is almost coming to a close. The program is going to be concluded with this panel discussion.

Looking toward the Millennium Development Goals, agricultural researchers must collaborate, and do capacity-building. What can we do regarding those two themes? The theme of this panel discussion is the “Collaboration among Researchers and Capacity-Building.” I am Senboku and I will be moderating this discussion. I am from JIRCAS. On many accounts I need your cooperation, and with your cooperation, I would like to proceed.

Since yesterday in our symposium, we had four keynote speeches and then we had Sessions 1, 2 and 3. In the interest of time, I will not go into what we discussed. Bearing in mind what we discussed during the past two days, through this panel discussion, I would like you to discuss collaboration amongst researchers and how important capacity-building is. I think we were all able to recognize the importance of this issue.

We’ve got six panelists. I would like them to speak from their own vantage points. First, we will go around the table so they can present their ideas.

I would like to make the introduction of the panelists and I will start from my right side. He has already spoken in Session 1 and he is Dr. Iwanaga, Director General of CIMMYT. And then from IRRI, we have Dr. Otsuka, Chair of the Board of Trustees, International Rice Research Institute. From JICA, we have Mr. Kitanaka, Group Director, Planning and Coordination Department. And then we have an IWMI representative, Dr. Hatcho, Chair, Board of Governors. From Tokyo University of Agriculture, we have Prof. Akimi Fujimoto. And from NARO, we have Dr. Horie, President of NARO.

So please give a big round of applause to welcome the six panelists. I am very sorry to ask you, but I will give five minutes each to the panelists to make the initial remarks.

Earlier on, we heard the substance of what they wished to say. The first issue will be about the collaboration of the researchers’ activities. I think Dr. Iwanaga of CIMMYT, and Mr. Kitanaka of JICA, will talk about that. Dr. Horie, President of NARO, would like to speak from that point, too. So in that order, I will ask them to speak.

And then, capacity-building is another perspective we would like to discuss. First, Dr. Otsuka of IRRI, then Dr. Hatcho of IWMI and Prof. Fujimoto of Tokyo University of Agriculture; these three people will mainly talk about capacity-building. In that order, I hope the panelists will take the floor. First, we will start with Dr. Iwanaga of CIMMYT. Please, take the floor.

**Masa Iwanaga:** Thank you very much. So I am the first speaker. The first is always the hardest. From an outsider’s viewpoint, I am thinking of the bottleneck in Japan’s global research and cooperation, and what improvements we can make. If we compare Japan and the West, we collaborate with various countries, various institutions. As the director general of an institution, the

biggest bottleneck I feel is that the traditional Japanese structure is vertically separated, vertically divided. Education is taken charge by certain ministries, agriculture another, but in research, particularly from an international viewpoint, this vertical separation becomes a big obstacle.

For example in the education field, research collaboration between fields and institutes is very difficult because of this. In domestic research, we can be a little flexible, but when it becomes global, the collaboration suddenly becomes difficult. And JICA that is involved in global research and the universities do not have good collaboration yet. For example, in JOCV, people who are involved in volunteer work accumulate good experiences, and they come back to their universities, back to their research. Things are improving now, but regarding such mechanism as compared to the US, Japan is behind by 30 years I think.

So, in terms of research for globalization, internationalization, this vertical separation in Japan is the biggest bottleneck. And on the individual level, regarding people who want to work on a global level, the young people who want to become global, and young researchers who accumulate experiences overseas -- once they come back to Japan, they are not able to utilize those experiences. That I think is the current situation of researchers and research institutions in Japan.

I usually like to make comments about the previous speaker but I was the first speaker today so I will do that later on, stop here and do that later on.

**Chair Senboku:** Thank you very much. I think you were referring to the silo structure of Japanese society which is maybe behind Western countries by 30 years, especially in the field of international research collaboration. It is the single-most important bottleneck you said. A very important point. Next, we go to Mr. Kitanaka of JICA to present his views.

**Makoto Kitanaka:** Thank you. The theme given to me is amongst JICA's operations: what is the collaboration between universities and research institutes? What kind of activities would they carry out in the context of JICA's operations? That's what I will be talking about in the first half. And in the second half, I will be talking about future measures to promote JICA's cooperation.

I'd like to talk about the new JICA. From October next year, for JICA and JBIC(the Japan Bank for International Cooperation), the yen credit portion will be merged, and then the grant component which is now with the foreign ministry will also be merged, so it's going to be a new organization, a new JICA. What will be the relationship between the new JICA and research activities? So I will talk first about that and then I will go to the specifics later on.

Now, currently the JICA Training Center is located in Ichigaya. We have various researches and studies in Ichigaya, and you are all supporting JICA's research activities. Currently in JICA, what we research is sometimes a part of capacity-building or preliminary research in order to prepare ourselves for the projects in the future. So it is not organizationally positioned per se as a research institute. But from October next year, we are going to have a new JICA and research is positioned as one of the major official functions of our organization. I shouldn't say from next year, but in the new JICA with the researchers, be it social science, be it natural science, I don't know to what extent it's going to incorporate. But, we will have more in-depth research because research is going to be one of the major operations of JICA. And I think one mission of the new JICA is to transmit what we find out internationally, globally.

Now then, what is the budget level? What will be the human resources in the new JICA? Currently, the demand for the budget is presented to the government. Through the screening process within the government, by the end of this year I think the budget scale will become available. So for the time being, I hope you will wait for a while. Regarding research, what I want to say is that research is going to occupy a very big portion within the new organization of JICA.

Now in concrete terms, in the field of agriculture, what are the things that we are asking researchers to do currently? So that is contained in the first discussion. The first one is to provide technical advice and suggestions in the field of agriculture, rural development and so forth. So, the researchers will be invited to serve on various committees. They will get involved with setting the future directions.

And regarding individual projects, they will again act as members of study teams, support committees and as JICA experts. Panelists today are those who are supporting JICA activities as such. In order to form projects, we send study missions and they will be asked to be on study missions so that they can utilize their experiences, or as JICA experts, they can be dispatched from JICA to the actual fields.

The private university professors can act as consultants. There are certain cases where private university professors are working as consultants. The Ethiopian representative made a representation about being trained, and Tokyo University of Agriculture is accepting them as trainees. And all over Japan, research institutions are accepting trainees. And then, there are many professors who are advisors to JOCV volunteers.

On recent efforts toward the expansion of researchers' participation, I give you points for these. Promotion of collaboration with the universities, including JICA projects: up until now, professors personally or individually had a lot of dealings with JICA, but we would like to expand that to the scale of departments or the universities as a whole. Other professors can get involved and JICA and the universities as a whole could form a good partnership. That's one direction.

And then we can hold regular meetings with research institutes. JIRCAS and JICA have held regular meetings all along. So through such regular meetings, we can compare notes, we can understand what we are doing mutually and we can discuss what we can do while going forward.

On future measures to promote JICA's cooperation, there are four points, and in the lower half we note JICA's expectations of the researchers towards going forward. These are more or less like the messages that we want to transmit.

Future measures to promote JICA's cooperation: first one is to promote researchers' participation, young researchers' participation in projects and other cooperation schemes in developing countries. We want to provide a springboard that can entice young researchers to go to developing countries.

And then we want to expand with new researchers and institutions who will conduct the training for overseas trainees. We want to cover the entire of Japan, more Japanese institutions to receive trainees.

I talked about universities. We would like to promote collaboration with the universities, at the faculty level or at the laboratory level, rather than at the individual level. In all of these, we want

researchers to go to the actual fields so that they can test what they have researched in these actual fields. So, the Rural Development Department of JICA has been trying this since last year. We try to give support in order to carry out verification tests in developing countries to be able to develop new technologies. These are the new attempts we are doing.

I will talk briefly about JICA's expectations of the researchers in going forward. For example, this time we had an international symposium and one of the themes was MDGs. MDGs and your research item No. X may be connected. I want you to be aware of the connection with the international agenda of what you do. I hope that you will keep having concern for the international development agenda and trend. You should catch up with the international trends.

Cost is another point. The developing countries can only introduce low-cost application technologies, so I hope that the researchers will perform proper use and combination of leading-edge technologies and low-cost application technologies.

The third message is that, beyond your area of research, there are many problems encountered in developing countries. There is no panacea. There is no magic bullet. So I hope that researchers can cope with the subject beyond their area of research with flexibility. At JICA, we have an international expert system. They have expertise. We have 100 international experts. In the field of agricultural machinery, when you go abroad, you can have a participatory water management with the background of agricultural machinery. I know a person more or less whose main theme is those subjects. So I hope that you can be aware of always increasing, improving the level of your careers.

Universities and many research institutes are now becoming independent administrative organs, so you can become private sector consultants. You are now released from the yoke of being national institutions, so Japanese universities and research institutes, it's about time that you can sort of become consultants. You can't do it overnight, I know, but the developed countries' university professors are acting more or less like that. So I hope that you will play the role of consultants by way of joint ventures with the private sector consultants in developing countries. I hope that you can explore various options so that you can provide consultancy services.

With those expectations in mind, I would like to complete my presentation. Thank you very much.

**Chair Senboku:** Thank you. It was a presentation by Mr. Kitanaka of JICA. I think he was rather specific about the activities of researchers in relation to JICA's activities. He talked about current researchers' contributions, as well as the new JICA organizational setup, and he also talked about JICA's expectations of the researchers.

Now we will go to discuss collaboration. I would like to ask Dr. Horie, President of NARO, to give his view.

**Takeshi Horie:** Thank you. I am Horie, President of NARO. In this symposium with JIRCAS, which is the sponsoring organization of this symposium and a sister organization to NARO, they asked that I should give some contribution by way of remarks. That's why I came. I want to talk about capacity-building in the research for agricultural development of developing countries. So I would like to share with you some of the ideas that I have formed.

First, some words about NARO, our organization. You may know or may not know; but to make

sure, I will talk about NARO. As is shown, mainly in Japan, we are a research body looking after the agricultural development in Japan. Starting from the irrigation system for the basic structures of production technology, processing and distribution, everything is looked after by NARO. We are covering the entire land of Japan. So from that point in mind, I'd like to give my remarks.

There could be various ways of providing international assistance to international joint research, but mostly we collaborate with JIRCAS or JICA. Usually, we render our support through JIRCAS and JICA. That is the main line of thought. But then we have bilateral agreements with other centers. In our organization which is related to agriculture, we have 14 institutes covering agriculture and we have one college. And altogether, NARO has 1,700 researchers. The main line of our research is domestic agriculture; for example, food safety/security, environments related to food production, or stable supply of food. These are the main research items. But international contribution is also included in our research objectives. Through JIRCAS and JICA, we get involved with international collaboration.

Viewed from a different angle, it looks like a dispatching agency of human resources to relevant places. I don't deny that aspect. There is a request that comes in and then we dispatch, and then when work is done, they come back to NARO.

Sometimes, we form our own projects, so proposals come. But sometimes, we are constrained and not able to send the best person because sometimes the person concerned can be the key person of a domestic project. A researcher comes back once an overseas project is over and there is a problem whether he or she can continue his earlier domestic research subject. These are the problems we encounter in our own organization.

But anyway, one of the objectives of our international collaboration is, to make contributions to the development of the developing nations in the issues of poverty reduction, environmental preservation, food security,. Another thing is how to cope with the global warming issue and cross-border diseases and pests, which may propagate. To solve these global problems together with the research institutes in developing nations, we want to conduct research. So we have two objectives in mind.

And another point that we expect is that through international collaboration. We can nurture human resources which are not present in Japan. In other words, the capacity-building aspect. As Dr. Iwanaga said, we have the vertical compartmentalization of society and we don't have internationally-versatile human resources. So probably we want to have human resources who are equipped with a cosmopolitan outlook.

Japanese research takes research methodology as important, and the problem-solving research is treated as a combination of those methodologies. Japanese research is almost treated like parts and components, so I think we should have researchers with problem-solving minds. When researchers go abroad, they don't have a choice and researchers are placed in a situation where problems must be solved.

Now, there is sophistication in the field of biological sciences; molecular biotechnology is coming into the area of agricultural sciences. But, field work is most important in agriculture. Because of the sophistication of the discipline, there are less and less researchers who can do the field work. In Japan, field work sounds very pre-modern; you have to work in the mud and so forth. But actually,

that is most important in agriculture, so you don't have a choice. If you go abroad, that is what you will feel. So I hope that new researchers will have this creative fieldwork in mind.

Nowadays, young people are not so tough. Once they fail, once they stumble, they think it's the end of their lives. So I hope that the young researchers would be tougher. You may stumble but you should recover again and then you can learn a sense of leadership. So I want researchers to have these new qualities.

As I said earlier on, through JICA and JIRCAS, experienced experts are dispatched and when they come back, they resume their domestic work, or they wait for another proposal and request and will be dispatched elsewhere. That's usually the process. But if we continue things as we are doing now, I don't think we will be able to nurture experts with international versatility. We want experts to be able to make a genuine contribution to the developing countries' agriculture. In order to do that, while you are young you have to be sent into the field to continue your research; otherwise, things will not improve.

For example, considering Japanese researchers, young researchers or the PhD students in universities should go to the actual fields, the project fields or CGIAR centers for some years. They should be dispatched and they have to do the research there. They get their degrees there and they should come back; otherwise, they will not have the international versatility and international qualification.

And there are students who want to do such things in universities. Before coming to NARO, I was in a university. Regarding those students who are coming to the agricultural colleges, I asked them "why did they want to join the agricultural colleges?" A substantial number of students responded in the following way: "In Africa, I watched the refugees suffering from hunger and I wanted to do something about helping save the refugees in Africa from hunger". That is motivating students to come to the colleges of agriculture. But the current Japanese university does not have a system of training university students to that end. Even if an available system was there, it is only due to the goodwill of professors' individual efforts; it is not an organizational effort. So there are willing young people. They should go abroad, but not just for gaining experience. As the JOVC example given earlier shows, having experience is not good enough. They have to do the research and they have to get the PhD and then they should come back. We should nurture such human resources.

**Chair Senboku:** We are moving towards capacity-building.

**Takeshi Horie:** Well, I came here because I wanted to talk about capacity-building.

**Chair Senboku:** So please go on.

**Takeshi Horie:** Capacity must be nurtured and a national project must be there. When I was in the university, personally I worked to that end, but personal activity/resources have a certain limit. So as a government, as a country policy, it should have this system. Gaining experience is not enough; it's not adequate.

Conversely, we accept the trainees from abroad. JICA accepts trainees. When I was in university, in graduate school I accepted trainees for one year. But in one year, they go back; there's nothing. I wanted students to get a PhD. I always tell students that. So in Japan they tend to be educated,

especially in the field of natural sciences, mainly on basic sciences and then the degree is given to a foreign student. I think that system is not really good. I think they should have field research experience so that they can bring back to their mother country what they learned in their research.

For example in NARO, the farm participatory research is done and students go to the fields and do just that. And after some years, they will complete the doctoral thesis. That should be the full-fledged research program. In a full-fledged way, capacity-building should be done and considered. That's what I want to emphasize. Thank you very much.

**Chair Senboku:** All right, he talked first about the international collaboration by NARO, and then in the second half he talked about capacity-building. Thank you very much. So we will go to Dr. Otsuka. Please take the floor. If you could kindly focus on capacity-building, please.

**Keijiro Otsuka:** Thank you very much. My name is Otsuka. I am not going to be speaking in my capacity as the head of IRRI. Since I'm an expert in economics, I would like to offer my personal thoughts on this matter, if I may.

I spent three or four years in IRRI and five years as a researcher in IFPRI, so I spent some nine years in this type of research institute. I forgot which year I completed my work, but I spent close to ten years. And as for ICRAF and other African research institutes, ILRI, WARDA and ICRISAT, we've also had research collaboration and joint collaboration.

Now as I have indicated before, there is an increasing demand for economists and economics. The reason is, be it poverty reduction and be it development in aid in Africa or be it climate change, there are many large-scale issues. However, there is no solid strategy. And it's not just in CGIAR. It applies to JICA as well, the World Bank, anywhere around the world. In other words, at a time when we most need strategy, there is a lack of strategy.

I think economics is the most appropriate school to address this matter. When there is difficulty in terms of funding, how can we acquire funding? It depends on the past results, verification of past results, and that's the role of economists.

However, in the CGIAR system, economics is weak. If Dr. Rabbinge were here, I'm sure that I would say to him the very same thing. I understand that he has returned back. But, the CGIAR system offers only very weak economics focus. And unfortunately, IRRI's economic program is quite weak. I spent six years as a board member of IRRI and this was one of my headaches. I've been trying to develop good human resources; we've made so many efforts to develop human resources there. And I will complete my duty in December this year, but I do not believe this issue could be resolved.

As for IFPRI, we had very strong economists and a few other centers also have a very small number of good economists. So there are a few positive spots here and there. However, IFPRI itself faces challenges, and I'm sure that Dr. Rabbinge would have received my comment, but for some reason IFPRI does not collaborate well with other CGIAR centers and this is problematic. But then that's here nor there.

Last but not least, CGIAR has done so many wonderful things. However, it has failed to publicize its wonderful achievements. That is because of weak economics. Then, can Japan offer assistance?

If that is the case, it would be most ideal. But unfortunately, economics in Japan... I'm afraid, economics study in Japan is also quite weak. It's something to be ashamed of. But at the same time, what about Korea, what about China, what about other countries? Compared against natural sciences, I believe economics study is still weak. Maybe this is due to the different linguistics. I believe Asia as a whole is weak when it comes to economics. Whether or not this is favorable or not?

And by the way, I do have respect for natural sciences, but economics is also a very historical study. You have to study basic science before you really can do anything in this area. You cannot be a full-fledged scientist; you cannot write a full-fledged paper unless you have such basic education. I think only maybe ten such experts really reside in Japan. So these people can actually make a tremendous impact, an immediate impact. But the pool itself is quite small, so we have to start from human resources development and capacity-building.

If we try to enhance collaboration with the pool we have, I do not believe we can make a strong output, so we have to begin with capacity-building and human resources development. I am involved in this area in FASID. I am very much involved in human resource development and I have been working with GRIPS and we have been creating English-language programs. We are involved in development studies; we have been teaching 30 people in the post-graduate department and we have received tremendous support from JICA in these programs.

However, one of our problems and the most perplexing issue is that the Japanese government agencies do not understand the importance of PhDs; they believe the master's degree is sufficient. However, from the standpoint of global research, especially multilateral institutions like the World Bank, they all have PhD degrees. So if you go to developing countries, most heads of the various bureaus actually have PhDs. However, in Japan the government is of the position that a PhD is not required, so no support is rendered.

So what about demand for PhDs? Is there no such demand here in Japan? That is not the case in my view. Much evidence supports this. For example, this year in MAFF, ordinary staff has received a PhD. Why did he receive a PhD? He actually took two years off from his work. So his government, his ministry, offered no support whatsoever, so this MAFF staff actually took off two years for no pay to study with us. There is another female staff from JBIC. She actually used maternity leave to acquire a PhD. She is of very strong stuff and we're trying to offer her tremendous support. We also have people from JICA, but there is no support rendered from JICA to the staff, so therefore this person actually had to stop his studies because of work pressure. He wanted to study but that was not possible.

Now, I've mentioned that there is a small pool, but I believe that the attributes and the characteristics of Japanese are very much in line with international cooperation. For example, Japanese researchers are very considerate. The US model focuses on money, "let's do this type of research" and so forth. That type of model is the US model. However, in the case of Japan, it is more considerate of others when it comes to cooperation and assistance.

As was mentioned by Dr. Horie—he talked about field work—I believe Japan's manufacturing spirit is very close to the field work. In other words, they do meticulous field work.

So in the area of economics, I think Japanese economists' work is greatly respected because it is



credible; they do such meticulous, thorough work.

So it is not that Japanese do not have advantages in terms of human characteristics and its attitudes to research; there are advantages on the part of Japanese. So what is lacking is training. I wish I could say, we will receive more people but that's just not the case, because there are many other more wonderful programs out there. However, be it MAFF, be it JBIC or JICA or MOFA, they really have to understand that a PhD is important.

When it comes to economics study, it's frequently mentioned that there are two international languages: one is English, the other is economics. When you talk about economics, if you have an economics PhD, you can engage in a conversation; if you do not have a PhD, you cannot engage in conversation. So I really hope that we can produce more PhD people so that we could entrust international research and international negotiations in a more favorable fashion.

If we attach more importance to this, then I believe we can enjoy the great potential that the Japanese people can offer. So let's provide more support. Thank you.

**Chair Senboku:** Thank you very much. The chair of the board of IRRI pointed out that the Japanese researchers should have better quality in terms of economics discipline and management discipline and organizational support was necessary for that direction. I think that was the gist of what he said. Thank you very much. Next, we will go to Dr. Hatcho.

**Nobumasa Hatcho:** When I received the theme for this panel discussion, I was wondering what I should say. Why do Japanese not play an active role overseas? That was where I started thinking of this theme, so let me talk about that.

On the first day, Dr. Yakushiji said that there were about 30, only 30 researchers in the CGIAR centers. That's only 2 percent. And in IWMI, International Water Management Institute, there's only 1. So compared to the US and Europe, the number is few and the extent of influence, the power, is very weak. And why is this so?

The first reason, the first problem is that especially with regards to the CGIAR centers, among the Japanese researchers, it's not known. As Dr. Iwanaga said, the CGIAR centers has various opportunities, activities and logistical support, but that is not well-known among the Japanese researchers, so special overseas research opportunities should be communicated to the researchers. Of course, information can be gathered through the internet, but more efforts will be required. JIRCAS is coordinating, is the contact window for CGIAR centers, so I hope that JIRCAS will work on this more.

The second reason, the reason Japanese researchers don't go to CGIAR centers: I'm not an economist but the reason is cost-benefit I think. Cost -- it's very costly, the cost is high. As JICA 's Mr. Matsumoto said yesterday, the physical strength and the brains, the intelligence and the personality and willpower, they have to be present altogether. Unless you have all three, it's hard to work overseas. And in overseas research centers, it's very competitive. It's very different from the environment in Japan. The language is different, and that's the environment you have to do your research work in. So it's very demanding, very difficult.

And so for that cost, what is the benefit? The Japanese researchers go to the overseas research

centers for two years and come back. The treatment, salary, reward, compensation, etc has a connection with the compartmentalized structure, but in the long term, it is viewed as not an advisable thing to take years off to go overseas. So if you want to make a contribution overseas, you have to be like a maverick or someone who can act on one's own, and that has to change.

So physical strength and intelligence and willpower (these three have to be together) are possible only if you're young. You tend to decline as you get old and you start feeling less like going overseas. So what can we do for them?

Two years ago, JIRCAS started assisting young researchers and we sent about ten young researchers to the center. I think this is a good system but two months is just too short. Two months is only long enough to experience on a short period but this is not a good enough lead-in to your next development, your next experience. So you need at least a two-year period, a period long enough so that you can be hired in that institution.

In the CGIAR centers, post-doctorate, doctoral level researchers are welcomed. And these are the drivers, the engines of the institution, so they welcome doctors. But in our institute, we use money to offer a doctoral program, a post-doc program from the developing countries and we also welcome people from the advanced countries at their own cost. So I hope something like that can be done by Japan too.

Until three years ago, the young scientist program existed in the Ministry of Foreign Affairs where the post-doc program, the post-doc students were sent out, but that is disappearing now, so we need to start changing. Otherwise things will stay difficult. Is this enough? Thank you very much.

**Chair Senboku:** Thank you. From Dr. Hatcho, he talked about the utilization of Japanese researchers' potential. As the focal point of CGIAR, JIRCAS was pointed out for that work. So he suggested a systematic approach in order to better the situation.

Prof. Fujimoto, thank you very much for waiting all along. Please take the floor.

**Akimi Fujimoto:** We are coming very close to the end of the session. There are many people next to me who are from universities, though they have different titles. It seems that I am the only one provided with the title of professor of a university, and I've been asked to talk about problems faced by universities in terms of capacity-building and I understand that this is the topic assigned to me. So let me talk about the problems faced by the university.

I have outlined only four issues on the first page. I will be very quick in the interest of time. As has been repeatedly mentioned, the first thing, in our case, all the way we offer nine years integrated study, all the way from bachelor level to the post-doctorate, so you begin with people in their teens, so it is very motivating. It is very difficult but challenging. But we are not working for fostering overly-completed experts. Maybe it's because of the island-nation mentality; the Japanese English-language education does pose problems.

There is a lack of language proficiency. In students who want to learn agricultural science or people who want to carry out international agricultural research, we find that there is lack of language proficiency. This is a problem and how to address this issue is probably the first and the greatest issue which we are facing.

Naturally, we have language studies and also we offer opportunities for international exchange and also a student exchange program outside Japan. But we need to further enhance language proficiency.

The second issue is the low level of international exposure. This is linked to the low level of language proficiency. Many Japanese travel outside of Japan. We are in the heyday of international travel; however, people who have the ability in terms of cross-cultural understanding, people who are endowed such sensitivity, those people should be the focus of education which we should carry out and bring forward.

Dr. Otsuka talked about the Japanese being considerate and therefore it makes them appropriate for international contribution and I do agree with that. But in order to exert that consideration, it's necessary that you should not be bogged down with one particular perspective. You need international exposure. That means the young people must accumulate international experience at a young age. Having international exchange, going out of Japan as an exchange student is required. In our case, we have a one-month short exchange program focusing primarily on our sister universities. We receive and we send students. And based on that experience, we also offer a one-year program as well.

Starting from 2001, we are hosting the International Student Summit whereby we talk about food issues on a global scale. So, every year we hold this summit and this will be the seventh year. We have received very favorable feedbacks and we are able to receive participants from 20 universities around the world. And many other nations are of the same view that their students lack international exposure. The students may have a very strong level of interest but they simply do not have the opportunity. So therefore, at this International Student Summit, many universities and countries send their students because of the favorable response. This is important to Japan, but this is also important for other countries. I believe international exposure is a common issue.

The third issue, in terms of linkage with the research activities, is a lack of practical training opportunities. I believe there is a lack of practical training opportunities in international agricultural studies and research. In classrooms or other various places, it might be possible to learn academics. However, what about international forums? Are there opportunities whereby you can accumulate experience in an international forum? That is lacking in the university context. This is due to the lack of finance. It's also due to the language proficiency problem. But, I think there's a mentality on the part of the universities and also the guardians about sending students to areas which are somewhat risky. This I believe is the nature of the Japanese community today and this does present problems.

We have sister university arrangements with some 18 different universities around the world. As has been mentioned, in order to overcome this particular issue, we need linkages with multilateral institutions. They are willing to receive and send people, and JIRCAS also has a program in terms of linking with a multilateral institution. So maybe this needs to be further expanded at the post-graduate level.

I believe education and research must be integrated. In the past this was decoupled, but I think you have to carry out education at the same time that research is under way. Therefore research and capacity-building/human resource development must be linked. This is something we must give thought in going forward.

And if I may go beside the main point of my presentation, this goes back to what Dr. Horie mentioned and I was thinking that perhaps I could omit this. But I think we need to avoid over-specialization because in the actual field you really have to have a comprehensive experience. By understanding the need for general understanding, we'll be able to develop candidates for specialties going forward. That's all. Thank you.

**Chair Senboku:** Thank you. So we heard the remarks of six panelists. They spoke from their respective points of view. Dr. Iwanaga, I think your remark was the shortest, so would you like to supplement what you said? With my prerogative as the Chair I will give you the floor. You heard the views of the five panelists, so you can liaise with what they said and then you can supplement your remarks. Already, the discussion between the panelists has begun.

**Iwanaga:** I didn't prepare any PowerPoint material. For the discussion, I thought we should be interactive so I deliberately didn't make a PowerPoint presentation. Regarding the other panelists, what they said was exactly right and I agree with them.

One thing I notice though, as Dr. Horie said, I was more interested in education or capacity-building but I was not assigned to that area. However, that is still my interest and that's why I do and what I do. There's nothing new about this. If we do the same thing two years from now, we will be doing the same thing and we will still probably be saying the same thing we said two years ago. That is my first criticism or my comment. I'm not saying this as a bad thing, but at Tokyo University of Agriculture, we receive students from the university every year and we deal with them directly because we hope in their future, and on the four points that Prof. Fujimoto mentioned, I always feel that way.

Having said that, students learn from their professors, their teachers. We have talked about students, but how about their professors?" Professors are in the worst environment, a worse condition than the students in Japanese universities. Can they, can students graduate from university without speaking, without knowing Japanese, just English? Dr. Otsuka, you said that the common language in the world is English and Economics. That's English and DNA I think. That's what I think you meant. Until now, on the opportunity of conducting classes in English -- we always talked about that, doing classes in English, but no one did it because the professors -- they object, they reject, because they can't do it; they cannot speak English.

Just like we cannot be researchers without using PCs, we cannot be researchers without using English. So if you cannot use English you might as well leave or else the situation will not improve. But setting that aside, we only talk about the students. We, old people, just continue discussing like this on the stage. It depends on who judges on this situation but I cannot expect much change just by doing this.

**Chair Senboku:** So what do you think we need to make a breakthrough? There are several things.

**Iwanaga:** In public, the administrative institutions cannot do this. We have to be somewhere out of that framework. For example, in the Tokyo University of Agriculture, we offer classes all in English for three years or when you move from sophomore to junior, you need to have 500 points in TOEFL. But if you do that, people will go against it. But, it's the teachers that will go against this. The management capability will be the decisive factor to make a breakthrough here.

Now, why are we discussing the fact that more Japanese should be in the research arena? Maybe we don't need more Japanese. In CGIAR centers on the PhD level, 1,000 or so researchers are there. And if there are only dozens of Japanese, it's like saying how many gold medals the Japanese won among all the gold medals won. And in the world track record the other day in Osaka, it was even worse. The overall educational level, with this current educational level, the economy level will decline accordingly I think. I'm saying this from a relaxed viewpoint. So a slow euthanasia is what I am expecting.

**Chair Senboku:** Well, the discussion is taking an interesting turn. So some people said that, I think it was Dr. Otsuka, we should be firmer and better. So what are the measures? You may have some counter comments. So we want to have discussion amongst the panelists and then we'd like to turn to accepting questions from the floor. That's the order of the day. So, Dr. Otsuka?

**Otsuka:** Thank you. I'm actually quite extreme, just as Dr. Iwanaga. I am from the academe/university, so if I receive such a comment then I cannot accept of course all such kind of comments.

**Chair Senboku:** Can you please focus on one point then?

**Otsuka:** Yes. Little by little, things are changing. In particular, when it comes to economic studies, changes are taking place. For example, there is much more focus on performance and results. And at Nagoya University, why was the ICCAE acknowledged as a Center of Excellence (COE)? This is because of its strong results. And again, the results really are based on performance.

And also about the performance of post-graduate students, it's actually increasing. On the selection process of scientific funds and so on, I believe things are really changing. So I'm not saying that that makes it all right. But I think, Dr. Iwanaga, your information is quite outdated. So if the current trend continues, I think we are moving toward the right direction. So I'm more optimistic.

**Chair Senboku:** Thank you very much. How about you, Dr. Hatcho?

**Hatcho:** I think that the potential, the willingness of the youth is there. But once they enter an organization, they get de-motivated; their incentive goes away and ends up in the current state.

As Dr. Horie proposed, in JIRCAS or elsewhere, regarding the institutions that do international research, maybe they should set it as mandatory to send those researchers overseas for at least two years to do research. Maybe something like that. Unless you do that, we cannot change the mindset to change things for the better.

**Chair Senboku:** Thank you. Today we have Prof. Fujimoto who can speak as the professor of a university. Please.

**Fujimoto:** Well, on the criticism from Dr. Iwanaga, I totally agree. I take those criticisms as on target, because if you try to do the English-language program at universities, it's the professors who are actually against this. And I am hoping that they would also exit from the scene, but then some people of course don't want to see them leave. So it's easy to criticize, but it's very difficult to address this matter because we're living in Japan. And the agricultural university is trying to address this issue. And we also have 30 different programs based on English language and we do have

English-language studies. But if you do everything, the whole thing in English, well, it's going to be quite a difficult process because we simply don't have such human resources. Maybe we collect all the people who are scattered throughout Japan, maybe we can do so. We have a few in our own university, but if we try to form one single cluster, it's very difficult. And this is where we must consider coordination and linkage.

**Chair Senboku:** Dr. Horie? How is the capacity-building in your organization? You are a mammoth organization. It's a colossal experimental research organization. In that big organization, you are working on capacity-building. Any remarks?

**Horie:** I don't want to set limits too narrowly. I don't want to frame what I am saying within my organization. Dr. Iwanaga said that we've been discussing the same tune all along. It sounded very critical, so I want him to understand where my interest lies.

In the final analysis, in Japan, on teaching all English classes in Japanese universities, you can't do that. I mean, even if you wanted to it's so difficult. But rather, I want to say that people can do their research abroad and then get a PhD. So the world uses English but probably not. For example, if you go to Madagascar, it's their language. If you go to Laos, the language is Lao or English; it's a mixture of those languages. So if you work there, the linguistic problem will be resolved in any way.

So what about those of us instructors in Japan? We just send them away? No, no. We have to support. The professors must have the integrated idea of supporting the students once they go abroad.

You just send them away and then find the theme and do the research. There are universities like that. Kyoto University is one such case. So many students go abroad, and if students hit wonderful themes coincidentally, it's wonderful. But if the students can't find it, they will just go astray. So it's all irresponsible on the part of professors. We send them out, then the sender's side must be responsible so that we have to continue providing integrated support, consistent support.

We've got JICA and JIRCAS. We have people from those organizations. We have university professors on the panel. We are here. So let us create such system altogether. That's what I wanted to say.

**Chair Senboku:** All right. It's about time that we should open the floor for discussion. Any questions or comments from the floor? Yes, please. A microphone will be brought over to you.

**Question (Koyama):** Thank you. Koyama from JIRCAS.

**Chair Senboku:** May we ask you to identify to whom your question is addressed?

**Question (Koyama):** Well, I don't have any specific person in mind. Well, if I were to point out, maybe it's Mr. Kitanaka. You talked about consultancy work. University professors and researchers must be involved in consultancy work proactively. And in the case of the United States, that has now become a popular consensus. Now in Dr. Rudy Rabbinge's presentation, he pointed out that we should not become or act over-consultative; we should not be overly indulged in consultancy. But in the case of consultancy, you're contracted to carry out certain work which may not be so creative.

So that being the case, how can we control this matter? For example, be it JIRCAS, we might receive external funding from the private sector? It could be that we might receive contract work which might not be in line with our initiatives.

**Chair Senboku:** So would anyone care to take this matter up? What about the direction in terms of advancing consultancy work ? Mr. Kitanaka, I think it's your domain.

**Kitanaka:** Yes, exactly. If you say researchers have their own research that they should carry out, in addition to that, they may be able to do something extra. In terms of being interesting, you can be a general contractor and then you can be contracted over a very big project. Now it's compartmentalized and it's almost like parts and components. You're contracted, just a part of it. But the overall project can be looked after. And in relation to ODA, people will find it very interesting on the job to look into the entirety of the project and young people can get involved. So on the job, young people can be nurtured by doing that. It's a matter of different degrees, but probably those are the things that you can do and we would like to render support.

**Chair Senboku:** Yes, please. Prof. Fujimoto?

**Fujimoto:** Going back to the issue of consultancy, it's not necessary that all the consultancy work is on a contracted basis. Be it JICA or be it JBIC, there are cases whereby we propose and advocate our own consultancy work. So universities' research results could be utilized in this matter. Maybe we could connect that to consultancy work going forward. It is now possible to do so. And at our university, we are trying to very aggressively pursue this. The Center of International Cooperation has now been changed to International Development Center. In other words, we want to do more work in this area. ,

But as was mentioned earlier, there is the issue of lack of know-how, and we have to work to a certain extent with overseas parties as well as private sector consultancy offices, consultants, etc. There is the issue of language as well.

**Chair Senboku:** Okay.

**Question (Iiyama):** My name is Iiyama, President of JIRCAS. It is related to that point. Until several years ago, I was a professor in the university and I would like to talk from that standpoint.

As Prof. Fujimoto just mentioned, for example in the University of Tokyo, there is the industry-academia collaboration research center and there is joint research, with 1,800 applications or solicitations where they solicit joint research and create a database for that. The Tokyo University professors are proposing such research and they are offering consultancies for those research themes. And there are about 70,000 accesses to this database and much joint research and consultancy work have been conducted already. So the know-how that they have should be publicized and this has to be done more proactively.

This is a challenge in going forward. In JIRCAS, we are trying to utilize the know-how we have and introduce that in our website, and to serve as a contact/liaison and to be of some use. That is one point that I noticed.

And another thing is something I noticed when I was in the university. The importance of field work was touched upon by Dr. Horie as well as others and that's exactly right. But inside universities, or not just in universities but in JIRCAS and in the incorporated administrative agencies as well and others -- when they hire people, they tend to be performance-oriented. In natural sciences, there are many that do laboratory work. But in agricultural research, data cannot be produced in a year. They come out only after three, four years of research. So, if you are involved in field work you cannot be competitive and beat others. And this is not only in natural science. This is also in social science. If you survey the documents, literature, you can produce something very quickly, but if you go into the field and gather data and start from there, you need common sense, a consensus to gather data. And there are many students who are reluctant to do field work; they cannot do field work. And so a breakthrough there is important.

So a performance evaluation system has to be considered and structured. When universities do this, they hire, they recruit in a very narrow way. They look, for example, for the people who have so-and-so results in so-and-so field or researchers in a specific field, when they want some field researchers. But this will work negatively. It makes us believe that they have already identified certain people when they advertise and that's another source of criticism. So in various fields, we hope that the strength of specializations, lab work and field work will be utilized by creating a new performance valuation mechanism. Thank you.

**Chair Senboku:** Thank you very much. Sorry, time is running short. Is there any short question from the audience? Please specify to whom you are addressing your question.

**Question (Matsui):** This is a question to Dr. Horie. There are many issues: silo structure, society, the linguistic problem, no English and few PhDs. So there are some problems. Until these problems are resolved, international research cannot be developed? Well, I would say from tomorrow onward, we nevertheless will have to pursue international collaborative research in a more forceful way.

Then, what can we do now? An effective solution, if you will, an effective means of improvement, what would it be? When considering that question, for sure there is one effective thing that we can do. Each organization should have the best and brightest PhD people who can speak English and they should have the toughness to work abroad. Such best and brightest people should be sent out. But actually in each organization, they want to hold on to such an excellent person. They don't want such person to go out. But for the international collaboration, the best and brightest must be dispatched from each organization. That is what I want to urge. Especially in the case of JIRCAS. If you have any joint collaboration with JIRCAS, I want you to do that.

**Chair Senboku:** Dr. Matsui, I think it is exactly the issue of JIRCAS. JIRCAS must do like that. That must be the grand premise, and the premise of that question is addressed to the presenter, to Horie-san.

**Horie:** Well, you raised a very specific question. I can fully understand what you mean. At the same time, well, this is the theme of international collaboration. But what is the current agricultural situation in Japan? I want you to think, are there people who can succeed? And can we continue to have agriculture in our country? That's the grand question. So the best and brightest should be dispatched? Okay, we'll do that. But in its stead, please give the best and brightest person to our organization. That's what I want to say.



**Chair Senboku:** At the outset, I said there is time limitation for leasing this conference hall and we have to consider the time when we have to exit this building. So I know that we want to continue on and on but I guess we have to wrap up, move on to final wrap-up comments around the table. So I will go to each panelist. Within two minutes, please. So the urgent message that you want to talk about, the absolutely important point that you want to emphasize, any suggestion, proposal, anything, we'll go around the table. So in the order of seating arrangement, Dr. Iwanaga, please.

**Iwanaga:** I deliberately made some harsh comments and thank you very much for responding to that. So let me be a little more optimistic. There are some professors who are more optimistic and I feel rest-assured. But I made some radical comments, as always, because Japan is changing. We know that and I think I know that. But the speed of change, can it be fast enough to keep up with the global pace? I think that speed in Japan is slower.

And you talked about consultancy. If Japan becomes a small country in terms of ODA, will we have enough power to work in overseas projects?

And we talked about the mechanism for young researchers to grow, to develop their capability but we do not have the basis for that. And those young people who cannot go out without the proper foundation, they cannot do this in the first place. For people to work abroad and to survive, they have to be able to do that with or without other support or foundation. Nomo and Ichiro, who went into major league baseball, they were first rejected or people went against them when they tried to go abroad, but they did and they were supported by the foreigners. And you won't be able to do that unless you have the capability within yourself.

**Chair Senboku:** Next is Mr. Kitanaka.

**Kitanaka:** Maybe I'm digressing a little from researchers' capacity-building. Japanese ODA is supported by consultants and I want to talk about the capacity-building of consultants. At one time, compared with the peak period, ODA has radically been decreased, so work volume has decreased. In normal times earlier on, if a project was introduced, usually it took five years and five, six experts were there. But now it is only three years long and two, three experts are involved. That's the normal standard. So for consultants, there is no place to do the capacity-building for consultants. There is no place or opportunity.

And much worse, work is not available. So for the people in their forties and fifties, at the prime of their career, the middle, the sort of middle range people, of course, the private sector is having a better economy, and these people are shifting to the private business world. So going forward, even though the ODA budget may increase, there is no guarantee that these people will come back to the world of ODA.

We've been talking about capacity-building of researchers, but I think capacity-building is needed in consultants and other areas for people in their thirties, forties, fifties, who are supporting ODA. They should be most active. And I think we have a paucity of this important group.

Now from us, to young people, to the extent possible, we want to provide fields and forums. What is going on now is, Hiroshima University, Tokyo University of Agriculture's graduate school people can be sent on the Japan Overseas Cooperation Volunteers system. So JOVC's scheme is used to send graduate students. This is only on a pilot basis, but I think we can continue exploring this

possibility. Professors can go also to see the students. We can think of this scheme. So within the organization, we want to do what is possible .

**Chair Senboku:** Thank you very much. Dr. Horie, two minutes please.

**Horie:** Last comment. I've been always saying the same thing. For example, people who have foreign experiences and then make a great contribution in my organization. There are human resources like that. In the morning, take Dr. Aihara who was in the audience. He was in India and he was having a hard time there but he hung in there, and then an un-Japanese sort of outlook was something that he gained. And we commend him very highly and he is assigned in very important research .Now, he has become the director of a research institute.

So capacity-building is promoted in an appropriate way. Half-hearted is not good enough. So for those people who have completely done the work, I think there should be a way of giving proper treatment to them. They should feel rest-assured in having their research abroad, and if they have done their work properly, they should be compensated properly. That's my last point.

**Chair Senboku:** Thank you. Next, Dr. Otsuka.

**Otsuka:** If I say something, if I make a careless remark I will be punished, so I am going to be very careful in my remark. It's about the consultancy work. Of course, it's important to enhance the capacity of the researchers, but at the same time on the capacity of the clients, the government agencies have to understand which of the scholars are competent, what scholars can actually achieve.

The Japanese government agencies, which are the clients of consultancy, are not controlling or manipulating the researchers. They have to have a PhD to understand what the researchers can do. If they have such degrees, then they can actually utilize the researchers so that they can produce a contribution. So we need to work on our part but I think the government agencies must also work on their part. And we see increasing participation by the scholars in various government committees. Whether or not we're on time, that's another question.

On the second issue on fieldwork, as was mentioned by Dr. Iiyama, yes, I do agree. If you do field work, it is time-consuming. As was mentioned by Dr. Horie, in our case, in the case of economics, we all do field work and we would accompany the fieldworkers. So what if maybe we're being overly protective, but we do take meticulous care of the students who actually carry out the field work. We try to maintain distance in the initial phase but at the time when the paper is published, then it will be in the form of joint publication. It's a very young program. Not many people have acquired a PhD yet, but I believe that five or six people have already provided papers in international journals.

And I also believe that we have to send out people outside. We have a team of eight or nine. If it is focused just on agro-economics, we only have four people involved in that. In the past, two people went to IFPRI and it was a joint appointment. They spent four months here, eight months there. In the case of IFPRI we actually sent out our best and they took away our best. So we only have one person left with IRRI but we would like to focus on such opportunities going forward.

And also in the case of post-doctorates, I think such people will emerge in the future. We don't

have a very large pool, but if we have capable people I think we should send these people out to the CGIAR centers outside Japan.

**Chair Senboku:** Thank you. Next, Dr. Hatcho.

**Hatcho:** Especially regarding consultancy, I am still wondering how I can participate in an effective way. In universities, you need to teach to a certain extent. That means you need to spend that much time. Regarding mobility of the Japanese professor; you spend half your time in university, half in research development. In such a working lifestyle, you gather the human resources in the center and work several years there and then come back to the university. If you have such a system, then the university professors will be able to participate. So this kind of mobility has to be there or else you cannot ask professors to do consultancy without doing work or without teaching in universities.

This kind of grand center initiative should be thought of. We send our people to the overseas centers where there are many people who are involved in overseas affairs, and then we bring them back and have them work in universities.

**Chair Senboku:** Thank you. Last, Prof. Fujimoto.

**Fujimoto:** Thank you. We have talked to various people from different agricultural universities around the world. What is clear is that around the world the number of students who want to study agricultural sciences is declining. At least the capable students are actually moving to different disciplines and all of us share a sense of urgency and crisis. So, we've been talking about capacity-building and human resource development. If that is the case, I think it is high time that we focus on the so-called borderless situation, and also borderless in terms of the players and actors in agriculture. I think the assumption we have is that this is based on Japanese financing and Japanese students. But this has to be changed. We can use exchange students. Maybe, we can even carry out training in third countries as was pointed out by someone from Malaysia. For example, in Germany's program they could visit a third country outside Germany. Maybe we need to be more generous because I think on a global scale, we are all facing the same challenge. So that's the point I wanted to make.

**Chair Senboku:** Thank you. How about time? Well, no more time. So I am very sorry but I am going to summarize so that I would be able to make one proposal to the audience. That's one pattern of panel discussion. But we received invaluable contributions by the six panelists from their respective positions. The time was not enough. I am sorry, but very good remarks were made by six panelists. From the audience, there were again very invaluable comments and questions. Thank you very much.

One thing is for sure: many issues were presented. At JIRCAS and at J-FARD, organizational substantiation is something which is called for. We should know each other better. We should know what the other party is doing. That is one way of linkage. And at JIRCAS, we would like to do promotion of capacity-building advancement. In a way, we want to come up with some radically-different system. So much homework is given as a result of this panel discussion.

In any event, I hope that the professors and panelists will give us their invaluable comments and advice for whatever we do while going forward. Dear audience, once again a big round of applause to the wonderful six panelists on the stage. Please. Thank you very much.

I feel so reluctant to close this panel discussion, but with this, we would like to end the panel discussion. Thank you very much for your cooperation.