

ALTERNATIVE APPROACHES TO SOLVE INTERNATIONAL ISSUES -A CASE FOR STRENGTHENING NETWORK OF NATIONAL INSTITUTIONS

Ryotaro SUZUKI

Director, International Research Division, Agriculture, Forestry and Fisheries Research Council
Secretariat, MAFF
ryoutaro_suzuki@nm.maff.go.jp

ABSTRACT

To help strengthen international agricultural research activities conducted by Japanese researchers and institutions, the MAFF started from FY2010 a new project called 'International Research Network Program on Global Issues'.

This project has two centerpieces below.

- A Funding for certain research activities by consortia of research institutions, which aims to solve global issues
- B Facilitating the formulation of a international research network, through organizing symposium, conducting strategic research and building infrastructure for information sharing.

In this presentation, some of the ideas that has driven this project will be explained, with specific focus on two key concepts , ie. ' International Agricultural Research' and ' Networking'.

The term 'International Agricultural Research' is commonly used, but the images that the word evokes are somewhat varied and the precise meaning is not so well defined. We propose to give this word a rough, working definition, i.e. "research activities in the field of agriculture, forestry and fisheries, which require some forms of coordination and cooperation with overseas partners, including those in the developing countries". Many Japanese researchers and institutes, in our view, have been actively engaged in such research activities, with the aim of helping to solve the global issues. There are those research themes which does not require any international coordination, but on the other hand, if they need foreign material or environment, usually there is no way but to seek help from overseas partners.

We are of the view that, by strengthening International Agricultural Research activities of Japanese researchers and institutes, we can help solve the global food issues and make a positive contribution to the enhancement of our national food security. Based on this belief, we further developed our ideas on what the government can do to help strengthening International Agricultural Research.

In business management context, a "Network" is defined as a collaborative relationship among independent companies, and such relationship is normally formed with the aims of having a stronger competitive power over the others. An effectively formed network can, for example, complement each other's strength, and can produce what each company cannot produce individually. Specific merits of networking may include: complementarities, optimization of resource allocation, effective provision of services for the external users, etc.

Since most of the advancement of agricultural science and technology is offered as public goods, many of the researchers and the developers in these fields are working for honors, not for private economic gains. Therefore, in theory, it actually makes sense to work together, rather than to compete,

to produce better results and deliver better products to the end-users. That will lead to elevating the international status of Japanese agricultural research community, and more people will stand to gain as a result.

Turning our eyes to the current situation in the country, what we find is that the smaller individual researchers and institutes, with the exception JIRCAS, engaged in 'International Research' on its own with little cooperation, coordination on their approaches. The public research funds also tend to favor domestic research, and often have many restrictions in its use overseas. Moreover, there are many Japanese researchers who have useful materials and methods that can be of use overseas but simply do not know how they can get to know such overseas contacts, or worse, even do not realize such potentials. We believe there are many cases of hidden treasures and lost opportunities.

'International Agricultural Research' should be promoted by country-wide Japanese agricultural science community. We do not agree to the view that if JIRCAS is doing the job, there is no need for the others to follow suit. We appreciate the significant achievements which JIRCAS has made over its 40 year history, but JIRCAS does not have legal authority over the others and simply can not do its work alone. We should promote and foster a sense of community among the Japanese scientists who are engaged, or are willing to be engaged, in international research, and raise an awareness that we all should work together.

If we can successfully form a 'network' of Japanese agricultural international researchers in the country, we believe that we can produce something better. If we bring out together the ideas and materials that we can work on, that in itself may stimulate each other's imagination, and help us to create something innovative.

If we can bring together those Japanese researchers who have a common concern for global agricultural issues, and willing to work with international community on those issues, and form an effective "network", such network will help individual researchers as well, by making the best of their strength and covering the weakness of each other. We will be able to demonstrate the power that each individual cannot. There are many ways to share information in the network. For example, it may well be possible to hold symposiums and workshops for that purpose. In this day and age, we can also make use of various IT and set up a home page. It is worthwhile to let the others know what you are working on. It may also be worthwhile to share specific facts and research results that the others may find interesting. It would be wonderful if such information exchanges will eventually lead to formulation of collaborative projects.

All the researchers of Japan, unite, and let us show to the world what a difference we can make!

KEYWORDS

International research, network

International Research Network Program on Global Issues

~ A New approach to global Issues ~
Networking of International Research Institutes

Ryotaro Suzuki

Secretariat of the Agriculture, Forestry and
Fisheries Research Council,
Ministry of Agriculture, Forestry and
Fisheries

The Summary

1. New Network Program an Overview
2. Main Ideas behind the program
 - 2 Key concepts → ①International Agr. Research
②Networking
3. Future expectations

1-1. New Network Program an Overview

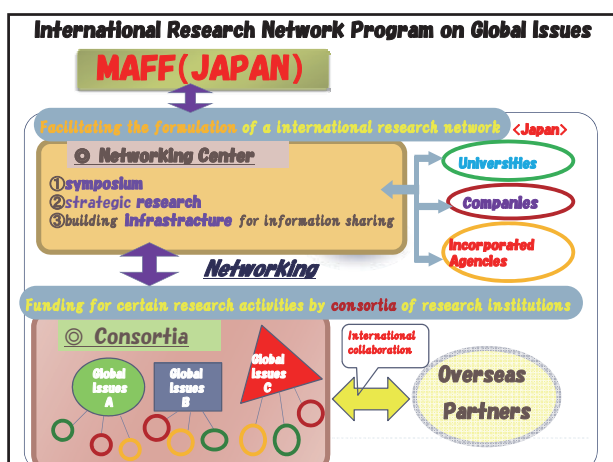
International Research Network Program on Global Issues (FY2010~)

- **Objective** : To help strengthen international agricultural research activities done by JP researchers
- **Design features** → 2 centerpieces

1-2. New Network Program an Overview

2 centerpieces of International Research Network Program on Global Issues

- **A** : Funding for certain research activities by **consortia** of research institutions
- **B** : **Facilitating the formulation of international research network**



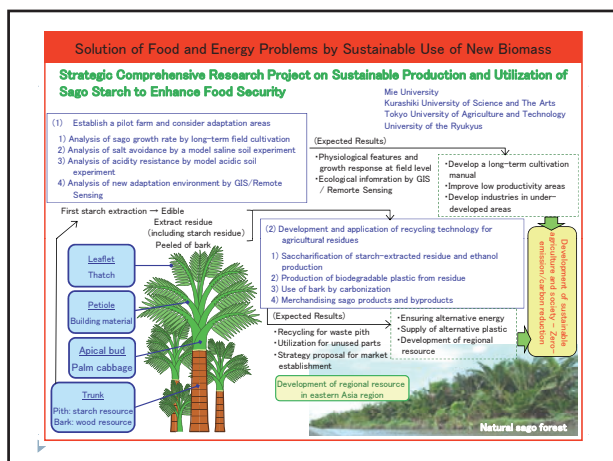
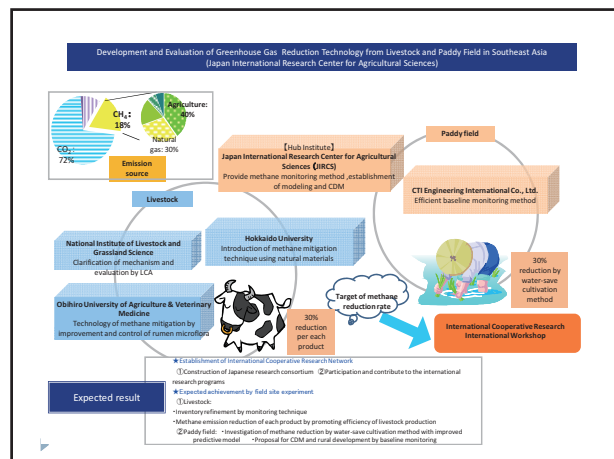
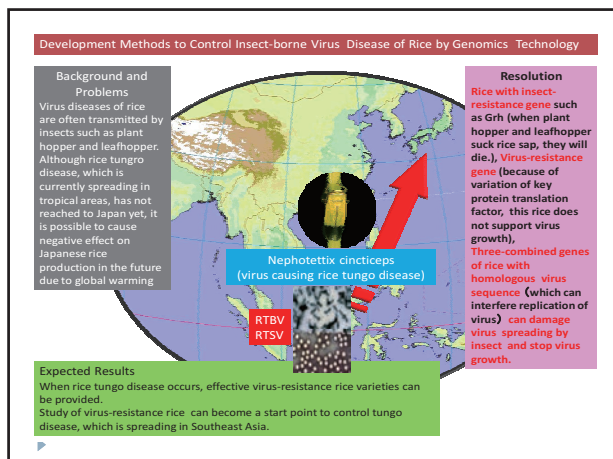
Research Themes adopted under this program (FY2010)

[Food security field] :

- Genetical pyramiding of the rice with insect and virus resistance by using the breeding method and genome resources

[Environmental resources field]:

- Introduction and evaluation of the greenhouse gas emission reduction
- Integrated strategic-project on sustainable production of sago starch



2-1. Main Ideas behind the program

2 Key concepts

- **International Agricultural Research**
 - ① What does "International Agr. Research" mean ?
 - ② The current situations – some observations and hypothesis
 - ③ The key idea on International Agricultural Research
- **Networking**
 - ① What do we mean by a "network" ?
 - ② Specific merits
 - ③ Cooperation works better than competition
 - ④ Necessity for New Networking

2-2. Main Ideas behind the program

International Agricultural Research ①-1

- **What does "International Agr. Research" mean ?**
(Research activities & necessity)
 - Foreign material or environment
 - Global Issues

Japan ↔ **Coordination & Cooperation** ↔ Overseas Partners

2-3. Main Ideas behind the program

International Agricultural Research ①-2

- **What does "International Agr. Research" mean ?**
(Working definition)
 "Research activities in the field of agriculture, forestry and fisheries, which require some forms of **coordination and cooperation** with overseas partners, including those in the developing countries"

2-4. Main Ideas behind the program

International Agricultural Research ②

〈The current situations /- some observations and hypothesis〉

- JIRCAS has the lead in this area, but not the one and only actor involved. Many researchers outside JIRCAS are also actively involved.
- Most of them (with the exception of JIRCAS) have limited resources and rely on individual efforts.
- There are many Japanese researchers who have useful materials that can be of use overseas but simply do not know how they can make use of them.

2-5. Main Ideas behind the program

International Agricultural Research ③

〈The key idea on International Agricultural Research〉

Stronger International Agricultural Research



〈Better solutions for global food issues〉



Positive contributions to enhance national food security

2-6. Main Ideas behind the program

Networking ①

〈What do we mean by a "network" ?〉

〈The key idea on "networking"〉

Forming a network (or a collaborative relationship)



Better coordination and cooperation



Stronger power, competitiveness

2-7. Main Ideas behind the program

Networking ②

〈Specific merits〉

- Complementarities
- Optimization of resource allocation
- Effective provision of services for the external users

【Example】

- JISNAS: Japan Intellectual Support Network in Agricultural Sciences
- J-FARD: Japan Forum on International Agricultural Research for Sustainable Development
- CGIAR : Consultative Group on International Agricultural Research
- GRA : Global Research Alliance on Agricultural Greenhouse Gases

2-8. Main Ideas behind the program

Networking ③

〈Cooperation works better than competition〉

The advancement of Agr. Science & Technology



Public Goods

Better Results



Work together

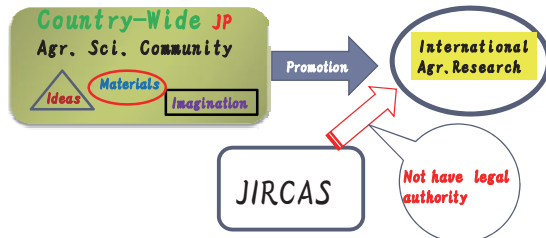


Competition

2-9. Main Ideas behind the program

Networking ④

< Necessity for New Networking >



3-1. Future expectations

< To Successfully form a 'network' >

With a successfully formed network, perhaps we can:

- improve our performance (ie. produce better things, more things, with less resources)
- add value to our existing resources
- stimulate each other's imaginations
- have more innovative ideas

3-2. Future expectations

< To form an effective 'network' >

We should :

- promote and foster a sense of community
- raise awareness that we all should work together
- share information, discuss priorities, coordinate approaches, etc.

The Conclusion

1. New Network Program an Overview

2. Main Ideas behind the program

2 Key concepts



- ① International Agr. Research
- ② Networking

3. Future expectations

All the researchers of Japan, unite, and let us show to the world what a difference we can make !



~Thank You~

QUESTION and ANSWER

Masami Yasunaka: Mr. Suzuki. Thank you for your valuable information. And, we can have a few questions and comments from the floors.

Ram Badan Singh: Unless you have common objectives, networks don't seem to work. You need to have common objectives and then I think people can cooperate and achieve results. What would be those objectives to have international agricultural research? I mean, these are all too vague, so I would press you on what would be the common objectives for the agricultural research community within Japan? The second one is not so much a question, but a gentle comment. You talked about controlling the microflora in the gut of the cattle in order to reduce greenhouse gas emissions. Now, in my view, cattle is a product of evolution that has taken place over the millennia and now you're trying to think about something like that might have unintended consequences. Wouldn't it be more interesting and perhaps effective to deal with such emissions through biogas production methods and energy conversion and so on?

Ryotaro Suzuki: I think you have a point. We need to have a common objective if we want to create a sense of community. Well, from an optimistic viewpoint, we don't want to give directions here. We want to allow research communities themselves to sort out their sensible objectives. We have here a number of researchers who actually implement international agricultural research and, well I'd like to put these questions to the researchers themselves.

The second point is perhaps best answered by Dr. Takenaka who is an expert on this field. But my understanding is that microbes are cohabiting with those livestock and the organization of those microbes will change over the time. And that depends on the kind of intake they have as well as the general environment. Rather than tinkering with the livestock genes, we can change the greenhouse gas emissions coming from those livestock by giving different feed for them. That's one of the ways to achieve that goal.

Akio Takenaka: Okay. Thank you for your question. Methane has energy, so methane production from livestock is a loss of energy. So I think if we can reduce methane production from livestock, it will improve the field efficiency for animal production. And I think in a more important way to reduce methane production from livestock is to improve the efficiency of animal production. And, I think measuring the methane production per product is a very important way. And, in the developing countries, animal production efficiency is still very low. Beef cattle in developed countries will be kept up to two years until maturity, but in developing countries, the grazing and extensive system takes more than three or four years. I think it will be a very big problem. The extension of the finishing period is also very important. And finally, almost all the greenhouse gases from agriculture production is caused by the microorganisms, so I think this area of research is also very important for the reduction of greenhouse gases. Thank you.

Masami Yasunaka: Thank you, Mr. Suzuki.