

# **Session 2**

## **General Discussion**

Chair:

***Fumika Sen*, JIRCAS**

Speakers:

***Ismahane Elouafi*, ICBA**

***Howarth Bouis*, IFPRI**

***Noriko Sudo*, Ochanomizu University**



Chair: Fumika Sen



Speakers: Ismahane Elouafi and  
Howarth Bouis



Speaker: Noriko Sudo



Questioner

**Fumika Sen**

Ladies and gentlemen, I am so happy so many young ladies can join today's symposium. We have 30 minutes for the general discussion. I'm Sen from JIRCAS; I am in charge of this session.

Based on our schedule, I would like to ask some questions to the keynote speakers; and the time is very limited, so please take about 3 to 4 minutes for your corresponding comments, I think. After that, I would like to ask the audience to have any questions and comments.

My questions will focus on the theme of today's symposium. I want to start with Dr. Ismahane. As you have mentioned many things such as poverty reduction and nutrition improvement can be expected by raising the role of the women in agriculture. As a successful female researcher, I think also, especially a research manager, could you give us advice and the necessary requirements for career development or how to mentally prepare yourself in this field?

**Ismahane Elouafi**

Just from my own personal experience, what I could say is that everything starts with a passion. If you like something very much, you really give back. I'm trying to keep away from telling my daughter what to do. They are anyway too young so I hope I'll have still the spirit when they come to decide where to go because it doesn't matter to be in the most attractive area; if you don't like it, you wouldn't give back so it's very important that everything starts with a passion. Every person should find what makes them laugh, what makes their heart beat. It's like falling in love with something. It's like falling in love with a man or falling in love with your kid. You have to love your job because you spend so much time at it. Once you have passion second you should believe in yourself. If you don't believe in yourself, nobody is going to believe in you. That's the second major point – believe in yourself, believe in your capacity, understand yourself, understand your strengths and your weaknesses. It's very sad that many people think they know all and that's completely wrong. My daughter, she is 10 years and she thinks she knows it all because she can Google it; that's not enough. Reading on internet is not how you know things; it's in-depth knowledge that is required. As a person that loves languages, I would say what adds to my life more than science is languages. Once you know a language, you get to know the culture deeper. You get to conduct with people real discussions and that's where you learn a lot. I think it's passion, it's believe in yourself and it's persistent, persistent, persistent, persistent. With everything; practice with persistent, you get to what you want. Put a target and run for it. As your target move, you move on. I hope I gave some of my own experience and I hope it's going to convince the young women here to follow their dreams and to fight for it. Thank you.

**Fumika Sen**

Thank you so much for your very valuable advice, I think. Thank you for your comments. The next question I want to ask Dr. Bouis. I know much of your research has been on developing and scaling up the delivery of biofortified nutrition crops to solve hidden hunger and malnutrition issues. As a founder of the HarvestPlus, many scientists I think join your program like crop scientists and economists and the nutrition scientists, so could you tell us how female researchers' point of view can benefit in your projects? Also, are there any general comments about having more female researchers in these fields? Thank you so much.

**Howarth Bouis**

Thank you. I thought I had already been asked all the questions, but this is the first time I have been asked that question. In that biofortification has a nutrition focus, I think generally mothers, women are more focused on nutrition than men are. HarvestPlus is very interdisciplinary, so we work with plant breeders, of course we work with nutritionists, but we also work with implementing agencies to scale up. Perhaps plant breeders who are women would be more attracted to work on biofortification, than some of the men who are breeders. Of course, the nutrition community is already dominated by women. When we get into the implementing activities – for example, the seed multiplication, farm extension, and food marketing -- women are very involved in the marketing of foods. I haven't really studied whether the proportion of women working on biofortification within each one of these sectors is higher. Nevertheless, one of the aspects of biofortification in general that has driven me is that is the food distribution in the household. We have studied the food distribution in the households, and it's always the women who sacrifice the most. They make sure that their youngest children get the most nutritious, expensive foods first, and then the adolescents are next in priority, and the women are always last; they are last in the line for the best foods. The nutrient requirements of women are very high – but what do they eat? They eat mostly food staples. By biofortifying the food staples, I have always felt that we targeted women -- but that doesn't answer your question about the women scientists.

**Fumika Sen**

Yeah, thank you so much for your important comments. Lastly, I want to ask Dr. Sudo. We have learned a lot about the crucial role female researchers play in the nutrition field, especially in developing countries. Nutrition research has just started in JIRCAS, especially in the social science field, so I would like to know what new researchers in this field should be careful about when conducting fieldwork, and if there's any advice you can give them, also give us. Thank you.

**Noriko Sudo**

Okay, in my presentation, I talked about the home visit. We visit the actual families to make a detailed observation because the reality that cannot be found through the questionnaire is something that we can understand through the home visit. In many developing countries, for women to contact with unfamiliar men is not accepted. Therefore, the female researchers would be more accepted. Both the male and female members of the family feel more relaxed and comfortable coming in touch with female researchers; that's the advantage, however, we still need to be careful not to cause trouble for the families, because being observed or being examined as a subject may still cause some unease. For instance, in Japan for us to visit families and enter their kitchen to observe the cooking and dining of family members cannot be done. However, in the rural areas of developing countries we can do so. But basically, we should not forget what you cannot do in Japan, we should use caution when doing the same in developing countries. Regarding the local diet – we don't know what kind of food they eat, how they cook, or how they share it among the family. Since we don't know, it is necessary for us to ask them to show us, so we have to have a sense of respect and appreciation of our actions and behavior in fieldwork. Also, in developing countries, the status of women is usually quite low and the human rights of women are not necessarily respected. Therefore, there is a possibility of sexual violence issues, and in the villages, they are missing the policing functions, so compared to what we do in Japan, we have to be mindful of our own safety and our own security. It is not safe for women to travel into the village on their own. They should make sure to have a male with them. It could be just a driver, but it is important to have a male member along. I talked about the scary part but as long as you are careful about that then the villagers, being close with them is quite heartwarming; a completely different environment from your ordinary daily living where you get to know them and for the entire day, you stay with the mothers so you get to understand how the local mothers live. We can completely understand the lifestyles of these women, so it's a very valuable experience that could change your own values. And for the villagers, they are spending a very simple normal life with no changes but they are meeting Japanese for the first time. In this sense, it's advantageous for both sides, whenever we do nutritional research, there is usually a crowd of people observing what we are doing, so in that sense, it's also fun.

**Fumika Sen**

Thank you so much for your wonderful comments and points are useful for us in the fieldwork. We have many fieldworkers in the developing countries also in Asia and Africa so it's very useful for us. Thank you so much.

Now, I would like to turn to the audience to floor for additional questions and comments. Before the question, please give us your name and the affiliation. Thank you. Some question I mean one... Okay please.

**Hiroshi Hiraoka**

Thank you very much Madam Chair. My name is Hiroshi Hiraoka. I'm a Senior Advisor of the Japan International Corporation Agency. Let me first thank and congratulate the organizers of this meeting as well as the keynote speakers and presenters for the excellent series of presentations and keynote speeches; it was absolutely fantastic. I'm saying this because it was another strong reminder of the importance of multi-sectoral nature of the nutrition issues for which Dr. Bouis has pointed out that it's the matter dialogue between the agriculture and nutrition for the case of bio-fortified crops. Then the argument was strengthened by the presentation of Dr. Basu and Dr. Shiratori as Dr. Lung'aho about the importance of the information as well as the evidence in order to for the agriculture sector to be able to hear the questions raised by the 'nutrition' health sector. I have noticed from Dr. Bouis when he says 'nutrition', it is the health side nutrition and it is a little bit different from the nutrition which is imagined by the people in the agriculture sector like me. This is a very important and deep insight that has been given to me during this presentation.

Then the next step probably would be in order for the agriculture sector to respond properly to the requirements coming from the health sector - the issue of nutrition needs to be structured in the agricultural strategy and policy, or in other words, the scope of the agriculture sector should be more oriented towards those specific nutrition elements, like iron and vitamins. That would really start accelerating the efforts of agricultural sector in order to address the nutrition issues defined by the health sector. The same thing is said

through the presentation of Dr. Sudo who really deepened the issue of the health, and focused the issues about the mother and children, and we recognize that this is another key issue we really have to think about for the nutrition advancement because the mother and child is key nexus of the intergenerated cycle of passing the nutrition status. Definitely, what is happening in most of the developing countries is this vicious cycle. We really cannot stop the malnutrition of mothers which is transmitted to the malnutrition of babies. We really have to cut it off.

Then she also opened up the issue of care, which is another question for the agricultural sector in terms of reduction of the burden of the female household members, especially through tools and mechanization. That will be another interesting point to think about. Also education, sanitation and water is also a prerequisite in order to complement our nutritional efforts.

Finally, ladies and gentlemen, the reason for more women – its already said by Dr. Sudo but let me add one more because women are mothers to create the next generation. Definitely that's what men can never do. From that point of view definitely women, there are some things only women can know, can feel, that's really transmitted into their ways and ideas about what a nutrition research agenda should look like, so definitely this is another message that I want to share with the floor today.

Very final words; the Japan International Corporation Agency last year launched the Pan-African initiative body, IFNA, Initiative for Food and Nutrition in Africa, which we believe to aim promote those multi-sectoral interactions so that all the communities in Africa really benefit from the multi-sectoral approaches for accelerating the nutritional advancement. Thank you very much indeed.

### **Fumika Sen**

There is a comment, yeah. Thank you so much. Any question?

Dr. Sudo would like to make a comment after that. It was very well summarized, thank you very much for your summary.

### **Fumika Sen**

Please.

### **Hirano (JIRCAS)**

Hirano from JIRCAS. My question or comment is not like the well-organized institutional comment like the previous one. My questions to comments more like that to the general issues about like female scientists issues. Actually to this point, I was talking to Oka san previously during the break but I always felt some kind of a logical gap when they talk about – first of all, don't get me wrong. I'm all for the idea of increasing the number of female research scientists in the science community and I have nothing against that but what has always been kind of bothering is there seems to be a logical gap that when people often face particular in the agricultural sector, the majority of the farming people community is the female farmers, and of course, the percentage, I don't know what could be the exact percentage but as opposed to that when you are looking at the science community then some research institute would have say about 13% of female scientists, it's kind of inequality or imbalance but what kind of bothered me is like okay on the farmer's side, the majority of the people are female. The scientists' side who used to study those issues or plans or the communities, not too many like female scientists, so would that be a clear reason that should we simply just balance and then increase the number of female scientists? Would that solve the problem? That has always been kind of... it was not bothering but it was always kind of hanging around somewhere in my mind, but actually listening to Dr. Sudo Sensei's presentation about the clear advantage of being a female scientist, particularly if that's the situation of home visit and that was a really convincing thing and of course I have always known that but it was very clearly stated, really convincing; so that I'm quite convinced, so what about their lab situation, particularly in ICBA or any other research institutes or any other science organizations, would simply increasing the number of female scientists solve the problem, if there is a problem? I was curious to know that if I can hear some personal comments or opinions from some of the people on the floor or stage then it would be very interesting hearing that.

### **Ismahane Elouafi**

First of all, there is a problem, let me tell you this upfront. Because if I see the study we did in the Arab world, we got at the university women up to 52-53% in scientific fields, so you go to university, you have the majority, it's women. I wouldn't be surprised that the rate is about the same in Japan, so in universities, you got women, you go to the workforce at large and then it starts dropping, whatever it is that workforce, be it in ministries, be it in research institutions. You go in the higher education, the numbers drop even further. You go in managerial, you get to about 2-3%, so there is a problem because in my mind, if girls are very good at school and they make it to university and they make it to post-graduate and they do their PhDs and what



have you, why don't they continue to use that knowledge in the workforce? That's is exactly what the TAMKEEN program was about. To look what's the problem. Why the women drop off later on? Why don't they stop before university? Why don't they stop at the university itself? We wanted to understand what are the roadblocks. For me, the numbers and the whole curve, there is something wrong about it. When we went and dig into it, what we found is one of several reasons that is weakening the woman is the leadership components. We were much more looking at why from women scientists, which is about 17% or workforce at large, you look in managerial positions and the percentage drops to 2-3%, so why you have that huge gap? Then what we found out, really is one of them is the stereotyping. If you ask many people do they want to have a male or female boss, most people will say they prefer a male Boss; including women unfortunately themselves; they are shooting themselves in the foot.

There is also the problem of not enough soft skill and competencies. Most of the curriculum does not have any soft-skills at the university. ONE of the most traditional sectors that didn't change across the board in south hemisphere as well as north hemisphere is education. We are still doing education in a very, very old way and if we continue this way, we are going to lose the next generation. We are still very much on hard science, very little soft. We are very much on basic disciplines and very little on soft skills. We give them disciplines but we don't show them what is it for. I remember very well myself the thing that I hated the most at university was statistics because I found it so hard but also I didn't understand what that is for. I remember when I was at the high school, I didn't enjoy history and geography, whereas it's extremely important because the way they teach it to you, it's not the right way. It's not about the discipline, it's about the methodology. I think there is a problem so we tried, we looked at those criteria and we tried to design a program to give them those opportunities. For me what is lacking behind are several roadblocks but also I want to sum it up as that women, she didn't have the same opportunities as men in general. In my perspective; It's not about equality because we are different and as geneticist and biologist, I do recognize that difference in hormones and what have you, but we should have the same opportunities. We could have the same opportunities for let's say a century and then we end up that we are still much lower than men; it's okay because that would be based on natural evolution. I could choose to stay home or I choose to become just a scientist and not become a leader; these are choices and personal choices but those choices have to be based on equal opportunities. I think that's why I keep repeating it is about having access to equal opportunities. We should give women equal opportunities with men and then let them choose what they want to do and we should recognize what are the roadblocks and try to minimize those roadblocks to give them the opportunity to go where they want; to go to the top of the ladder; if they choose to do it of course.

#### **Noriko Sudo**

I'm not sure about the researchers in the agricultural sector but in the nutritional sector that I'm in, in the past the nutritional researchers were the graduates of the Department Faculty of Agriculture but in the past two decades, there are more and more universities educating registered dietitian nutritionists, mostly women's universities, around Japan. Furthermore, nowadays, there are graduate schools above the undergrad programs where you can further study nutrition, so I think there would be more female academics in this field. We can look forward to seeing what kind of impact that would bring about in the society in the future.

#### **Fumika Sen**

Thank you so much. It's okay? We have 1 to 2 minutes left. I want the last question. Please?

#### **Tsujimoto (JIRCAS)**

I'm Tsujimoto, a researcher from JIRCAS. I'm also an old-fashioned researcher who still cares about tons per hectare and productivity but not much about the nutrition. But, in a series of discussions I luckily heard from yesterday, I'm learning the importance of the link between agriculture and nutrition, but one point I felt missing in the discussion is, I don't know, but the critical review about what occurred during the period of non-nutrition sensitive agricultural development. For instance, in the presentation of Dr. Howarth, you showed the price down of cereal crops but price up of vegetables and fruits even during the period of the green revolution. We need to do the critical review what occurred for nutritional side during the period of achievement of the green revolution if we call that as non-nutrient-sensitive agricultural achievement. The review is not to criticize the achievement of the green revolution but to make our current activities to link agriculture and nutrition more specific and more effective. This is rather a comment but if there are any answers and if anybody knows about those kinds of references who critically reviewed what occurred by doubling, tripling the yield of only cereal crops and what occurred in the nutrient status during that period.

#### **Fumika Sen**

Okay, short comment please.

**Howarth Bouis**

I agree with the comment. I didn't have a chance to show some of my slides on zinc density in rice, just as an example, but we have a hypothesis that when the rice yields went up and up, the zinc density in the milled rice went down and down, but nobody has really studied it. In fact, most of the zinc intakes in Bangladesh come from rice even at lower zinc density levels presently in high-yielding varieties. It may be that the high prevalence of zinc deficiency in humans resulted from the increase yields, and not paying attention, not even knowing, that zinc densities in milled rice were declining. Until relatively recently we did not even know zinc deficiency was a problem in humans in Bangladesh and we weren't paying attention to the nutrition content of milled rice, so we could learn from those mistakes. I want to use this tons per hectare and nutrition dichotomy, as a segway to talk about the traditional foods. A fundamental tenet of the biofortification strategy is that biofortified varieties are both high yielding and nutritious. I think that is what the discussion on indigenous foods lacks now -- the emphasis on high yields. To feed the world we have to have higher and higher yielding crops. Traditional varieties are often already highly nutritious, but how do we make them profitable for farmers to grow and how do we get the consumers to eat them? Nobody mentions prices. We need to make sure that the prices of the indigenous crops are low. Farmers don't like low prices that so indigenous crops need to have high yields to go along with the low prices. Traditional crops are very good on the nutrition aspect, but they also have to be also very good on the tons per hectare.

**Fumika Sen**

Okay, please be short.

**Ismahane Elouafi**

Just to add on what Howarth said. I think that's is where biodiversity has been left out but also public policy as you mentioned. If we look at subsidies, most subsidies are on the staple crops. Globalization moved everything to the staple crops but also did subsidies and policies. I think if we worked, if public invested as much in vegetables as they did in cereals, most probably the production would have gone up and the prices would have gone down. Right now the seeds of most of the vegetables are mostly in North Europe and they are extremely expensive as an import, so it drives the whole price. I think really it is about time to maybe revert back; biofortification its great but we need to also combine it with indigenous biodiversity and changes in the policy to also help have a normal pricing instead of competing with the super subsidized crops under the globalization agenda. Thank you.

**Fumika Sen**

Thank you so much. It's about time. I want to close the session and the time is already over. As you know in JIRCAS we only have 13% female researchers but we have increased the number in the last 2 to 3 years. We are expecting to see inspirational works in agriculture, food and nutrition fields. Finally, please give a warm applause to all the speakers and thank you so much for your attendance. Thank you.

