

# Commemorative Lectures

Commemorative lecture of laureates took place at “Toki Messe·Marine Hall” from 14:30 of 29th October, after the opening address of the Chairman Hajime Koizumi.

## The substance of the lectures

### **Main Prize**

#### **Mr. Tatsusi Tsuboi**

Expert of Namulonge Crops Resource Research Institute  
JICA Rice Technology Advisor

The dry-land NERICA rice carried out the important role in prevalence of rice farming in Africa. NERICA was a hybrid of between an Asian rice and an African rice which was a success to the development by Doctor Jones of Sierra Leone in 1992. Doctor Jones was the first Laureate of Niigata International Food Award. Until now, I worked on breeding NERICA with Doctor Jones.

NERICA has big ears of rice and a lot of ears of rice, and grows in short time, bear fruit quicker than conventional types. We cultivate NERICA in dry land which means that there is no cost to cultivate in wet land, and that is meaningful to cultivate in swamp area during the rainy season.

It had been impossible to grow crops in drought area, chopped tropical forest field, coral lime soil, in the aforementioned places, but NERICA rice grew.

For NERICA newly created region there is no originally rice, because there is no rice mill, it becomes very popular after you tour the villages move rice mill that is loaded with rice milling machine to the track in the "Mobile Rice Mill", rice mill is a lot by now, they can be milled on their own.

In African countries NERICA is only a new crop. The farmers and the researchers do not have much information and experience about rice farming. We know that it is necessary to have long-range support for the spread.

I also I would like to continue the activity.

### **Sano Tozabro Special Award**

#### **Dr. C. L. Laxmipathi Gowda**

Deputy-Director-General (Research) / ICRISAT

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is the only research institute for the agriculture in the semi-arid area and working for the African staple diet such as sorghum and pearl millet, peanuts, chickpea and pigeon pea.



I am working on chickpea that is quick to ripen and strong at enduring the heat.

In 1960 ~70 the chickpea had been the main crops in the northern India, but after the Revolution of Green, many farmers started to produce the wheat because of high income. Though the majority of people in India were vegetarian, they needed the pea for the protein. Chickpea's production area was moved from north to south where the temperature was higher, and we had to develop the variety that was quick to ripen and the heat lasting type.

The successful breeding increased the production area and the production volume. Our research looked like this was an end, but of course this was still in the beginning stage. It is forecasted that there is the problem of food supply in 2050 since world population is said to be 9 billion.

I think the government will need to invest in research and development on more on agriculture. Technology provision and information supply to farmers using the Mobile phone, the storage facility providing, creating mechanisms to devote to capital investment by financing the crops that were stored there as collateral so, it becomes assistance to food manufacturing and processing. The farmers are merely making crops but also they try to be the innovators or businessperson.

## 21<sup>st</sup> Century Hope Award]

### Dr. Hiroyuki Nakai

Assistant Professor  
Graduate School of Science & Technology  
Niigata University

Glucose exists a lot in the natural world, and used various types in our life. Above all non-digestible oligosaccharide is the favorable food raw material to the prevention for the lifestyle-related diseases. Oligosaccharide has many varieties but large production is difficult and only few product is used for industrial needs. In my research, I noticed at the enzyme phosphorylase that is produced from microbe. By using this enzyme, beneficial healthy oligosaccharide variety produced greatly. Now we have more than 200 kinds including the new types. For example, there was a functional oligosaccharide which had excellent physiological function that is included in the sake and the small amount of food fermentation, now it is possible to make it in the large production. We expected it to be used in medicine or as a material of cosmetic. From now on we are going to find new oligosaccharide and make oligo-library, then Niigata University becomes the stronghold for the oligosaccharide of international resource.

Now we are solving the function of new oligosaccharide and find many function that are to propagate selectively intestinal good bacteria and control the multiplication of bad bacteria. Another one is to propagate the immunoglobulin A which has the mucosa mucus of the digestive tract.

In the future, we are thinking to search the useful oligosaccharide that has specific function, and to make and produce it.

