Annex 3. Summary of Open Seminar

FNCA 2009 Workshop on Biofertilizer Project
Open Seminar on Challenging Sustainable Agriculture

Hosted by	:	**Department of Agriculture of Thailand (DOA)** **Thailand Institute of Nuclear Technology (TINT)** **Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT)**
Date	:	**2nd November, 2009**
Venue	:	**Rama Gardens Hotel, Bangkok, Thailand**
Total Participants	:	**31 People**

1. Roles of Nuclear Techniques for Sustainable Agriculture

Dr. Sueo Machi, FNCA Coordinator of Japan, Former DDG, IAEA

Poverty, hunger, and food security are big problem and 17 % of people in developing countries suffer to be chronically undernourished. Nuclear techniques such as mutation breeding, biofertilizer, sterile insect technique and food irradiation, contribute to increase harvest, combat plant and animal disease, and protect the land and environment. It takes an important role for sustainable agriculture.

2. Biofertilizer Application to reduce chemical fertilizer in Thailand

Dr. Supamard Panichsakpatana, Faculty of Agriculture, Kasetsart University (KU)

Due to increasing cost of chemical fertilizer, the use of chemical fertilizer is decreasing since 2005, but the demand is still high. In Thailand, application of biofertilizer mainly includes rhizobium, PGPR, AM, phophate solubilizing biofertilizer, and they can reduce the use of chemical fertilizer significantly. In our research, rhizobium biofertilizer can decrease chemical N by 100%, whereas, PGPR, AM, P-solubilizing biofertilizer can effectively reduce chemical fertilizer by 15%, 20~30%, and 10%, respectilvely. The government has paid half price for improving the application of biofertilizer, and encourage farmer to use biofertilizer.

3. Mutation Breeding for Sustainable agriculture

Dr. Siranut Lamseejan, Consultant of GISC, Kasetsart University (KU)

Mutation breeding is the use of physical and chemical mutagens to induce inheritable changes in the genetic background of a plant and then select offspring with the desirable characteristics. It has been used by researchers worldwide since 1970s and already translated into tremendous impact on agriculture. Mutation breeding is a clean and effective technology that does not harm the environment and it can be one of key solutions for sustainable agriculture.

4. Research Activities to Develop Sustainable Agriculture in Japan

Dr. Shotaro Ando, NIAS

“Whole crop silage of feed rice”, “fermented liquid feed from scrap of food”, and “development of cellulosic biomass and its conversion system as feedstock for bio-ethanol production” were introduced as examples of research activities to develop sustainable agriculture in Japan by Dr. Shotaro ANDO of National Agriculture and Food Research Organization (NARO), Japan.