

Perspectives for Development of Research and Education by International Collaboration in Graduate School of Bioagricultural Sciences, Nagoya University

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The total number of foreign students in Japan has increased rapidly to 80,000 during the last three years. This increase was due to the rise in number of self-financed students. The number of students under the Japanese government scholarship remained rather constant and comprises only 10% of the total number. This situation poses a serious problem, which needs the attention of the Japanese government. One possible solution is to request the Japanese government to increase the number of state-supported fellowships.

At Nagoya University, about 1100 students are now studying on campus, which implies that the research and educational activities of Nagoya University are highly evaluated abroad. The changes in the number of the foreign students of Nagoya University are similar to the general trend at the country level where the number of self-financed students increased and reached about 70% of the total foreign students (Fig.1). The number of students under the Japanese government scholarship remained rather constant. However, the ratio of the Japanese government scholarship students to the self-financed students in Nagoya University is significantly higher than that at the national level (Fig.2).

Seventy percent (70%) of the foreign students are studying to receive doctorate degrees, since Nagoya University is one of the research universities in Japan and aims to provide higher education for graduate students. Eighty-five percent (85%) of students are from Asian countries, while only 7% are from Europe and United States, and 5% are from Africa and Central and South America. The majority of foreign students are from China and they comprise about 45% of the total foreign students, which causes some disadvantage to them, for example, to get fellowships (Fig.3).

Foreign students are confronted with issues and problems not only in their research but also in their life in Japan. The main problems shared by students are 1) problems caused by cultural differences, 2) needs for scholarships and housing, and 3) research projects.

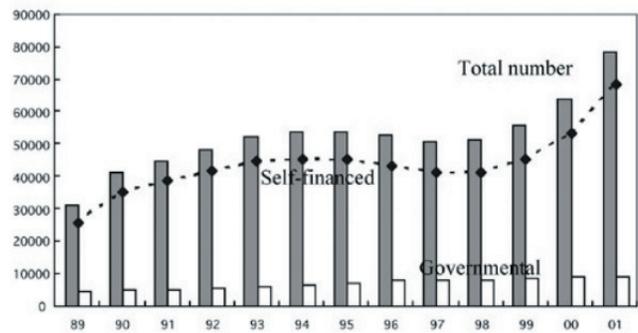


Fig.1 Changes in numbers of foreign students in Japan

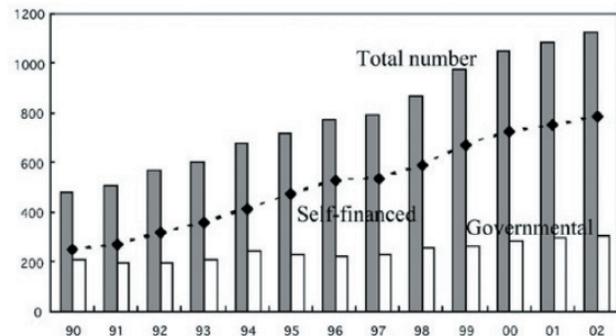


Fig.2 Changes in number of foreign students in Nagoya University

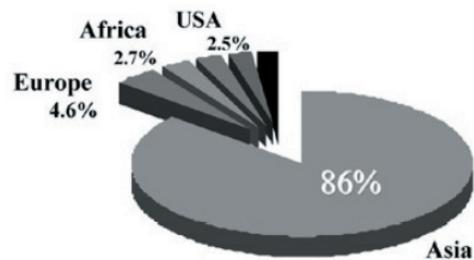


Fig.3 Countries and areas represented by students in Nagoya University

Foreign students in Graduate School of Bioagricultural Sciences

We have admitted altogether 366 students from 27 countries up to 2002. Seventy-three (73) students admitted at the School of Bioagricultural Sciences is the largest number received in our school so far (Fig.4). However, this number has reduced to only 56 students studying in our School in 2002. Noticeably, the number of self-financed students has increased. The countries and areas represented by the students in our School and their relative ratios are also similar to those of entire Nagoya University (Fig. 5).

The research facilities in our school are of top levels in Japan and we have many advanced equipments. Foreign students find it convenient to conduct their researches in their own laboratories. Most of the faculty members have experiences in doing research abroad and they are making efforts to maintain their high level of research through cooperative works with foreign scientists. To achieve high quality level of research, foreign students are requested to do experiments on complex problems requiring intensive research. As far as foreign students of our school are concerned, they perform very well and do their best to respond to the requests made by the academic advisors. So far, 188 students obtained PhD and 150 students obtained Master degree.

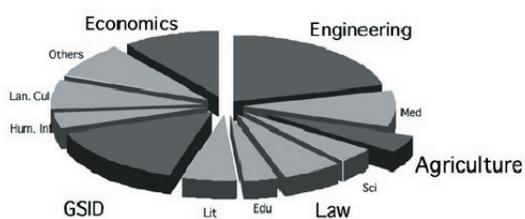


Fig.4 Numbers of foreign students in each school

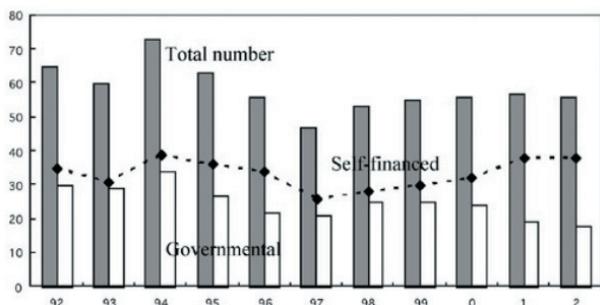


Fig. 5 Changes in numbers of foreign students in Graduate School of Bioagricultural Sciences

International exchange programs in Graduate School of Bioagricultural Sciences

We have altogether 11 exchange programs with 11 universities and institutes from nine different countries. Implementation of activities based on agreements with Kasetsart University and North Carolina State University has been quite active (Table 1). These are university-wide agreements, which enable the faculty members of other schools to participate in exchanges. These exchange agreements aim to promote cooperative researches and exchange of faculty members between our school and the other institutions. Exchange of students, usually graduate students, is only a part of the agreement and research projects are mainly emphasized. Since Nagoya University is a research university, it is inevitable to place more emphasis on faculty exchanges than on student exchanges. To activate the agreements and implement the academic exchange of the faculty members for the joint researches, we need financial support. In the past, we were quite lucky and obtained twice the University-University cooperative research grants to conduct joint researches with NCSU (1987-1989) and Rosario National University (1995-1997). In addition to this type of grants, we can apply for national grants to conduct joint researches with foreign scientists at the individual level. I have obtained such joint research funds with University of Nottingham in UK and Melbourne University in Australia. Through these joint researches, I was able to make good and strong relations with my counterparts. I did not, however, exert personal efforts to conclude any departmental or university-wide agreements with those universities. There is no administrative assistance from the university in carrying out all paper works necessary in concluding the agreements. Individual faculty members concerned do all the works. The faculty members including myself simply have no time for these administrative works and therefore are very reluctant to be involved with the exchange agreements. I feel that there are many similar cases in this School. It is important now to look for joint research programs for future development of our School and make efforts to conclude agreements.

International Exchange Committee in Graduate School of Bioagricultural Sciences

The External Review Committee evaluates our international exchange activities twice. In general, our activities are considered to have reached a high level by current Japanese university standards. However, several suggestions have been made as follows: 1) acceptance of foreign students from both developed and developing countries, 2) establishment of a system that provides post-departure follow-up of foreign students and feedback to the School, and 3) education of Japanese students on their international awareness.

Future Perspectives

A former foreign student suggested several things in his memoirs, which he contributed to the 50 years history of the School of Agriculture. These are as follows: 1) active exchanges at the level of graduate and undergraduate students, 2) exchanges of advanced information as well as planning of joint researches, and 3) financial support of researches for former students. We

might be able to materialize some of these suggestions in the future. We should discuss about these possibilities in our international exchange committee. I would like to take this opportunity to propose a discussion on the possibility to organize a new Consortium to cooperate on research and education for sustainable bioproduction around the world. I would like to conclude this lecture by quoting the comment made by Dr. Shang Fa Yang, one of the members of the External Review Committee:

“During the 1960’s and 1970’s, the USA played a very important role by providing the training for many international students and visiting scholars around the world. Now, Japan is in a good position to do the same. I sincerely hope that Japanese government takes a more active role in this endeavor, by providing more funds so that Japanese universities, including Nagoya University, would be able to more actively participate in this program. I trust this is the privilege and also the responsibility of Japanese people.”

Table 1 Academic exchange agreements in Graduate School of Bioagricultural Sciences and ICCAE

1) Kasetsart University	Thailand	1981	University-wide
2) The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA)	Philippines	1983	University-wide
3) North Carolina State University	USA	1985	University-wide
4) University California, Berkeley	USA	1989	Departmental
5) Rosario National University	Argentina	1993	Departmental
6) The Research Institute of Biochemistry, "Luis F. Leloir, Capomar Foundation"	Argentina	1994	Departmental
7) Nottingham University, The Faculty of Agricultural and Food Sciences	England	1994	Departmental
8) The Institute of Cytology and Genetics, Siberian Division of the Russian Academy of Sciences	Russia	1997	Departmental
9) Australian National University,	Australia	1997	Departmental
10) Bangladesh Agricultural University The Research School of Biology	Bangladesh	2000	Departmental
11) African Institute for Capacity Development	Kenya	2002	Institutional