The Korean Experience in International Collaborative Research

Oh, Dae-Geun*

ABSTRACT

The Korean version of the Green Revolution has been the firm foundation of the economic growth of the country, specifically with the government's prime focus on self-sufficiency programs in rice and labor-saving activities for the whole agricultural industry. The achievement was partly attributed to the benefits gained from international collaboration with the international agricultural research centers (IARCs) and the bilateral collaboration forged with several countries. With the collaboration, the knowledge and technologies acquired helped generate and produce new varieties with high-yielding capacity and improved cultural practices. One area that has significantly contributed to Korea's agricultural development programs through international collaboration is its commitment to capacity development for scientists. This is and has always been the prime component in designing our collaborative programs with various stakeholders. Through the internal effort and help from outside, the Rural Development Administration (RDA) has evolved to become a national agricultural research and extension system that has the capabilities of solving the national agricultural problems as well as assisting other developing countries in the region.

As the national economy improved starting in the early 1980's, RDA has also assumed a significant role in international collaborative research activities to help developing countries in the region. Learning from its past experience as a recipient country of the Official Development Assistance (ODA), RDA shares what it has developed. Thus, the mode of collaboration is designed to include the capacity building of NARS scientists, the transfer of key agricultural technologies such as rice breeding and seed multiplication, and the sharing of methodologies to improve technology transfer mechanisms. In the past, rice had been the most frequently requested subject for research and collaborative undertaking. Nowadays, however, upland crops, vegetables, and livestock production are gaining much importance in agricultural development. Specifically, the transformation of the basic 'Saemaul Undong' concepts on rural development has been successfully implemented in several developing countries.

In addition to the bilateral collaboration, RDA pursues its collaborative undertakings with several IARCs, including the International Rice Research Institute. The collaboration includes: sending RDA scientists as the seconded scientists, supporting special training courses, providing funds for strategic research programs, and co-hosting international scientific meetings. RDA welcomes more responsibilities to actively participate in IARCs' efforts to solve the world food problem. Participation within IARCs' consortia together with other stakeholders is a necessary step to tackle longer-term projects and significantly contribute through research collaboration.

INTRODUCTION

As a country recently changed from an ODA recipient to an ODA donor, Korea is only just beginning to find areas in which it can be of use to the international community.

* Director, International Technical Cooperation Center, Rural Development Administration (RDA), Korea

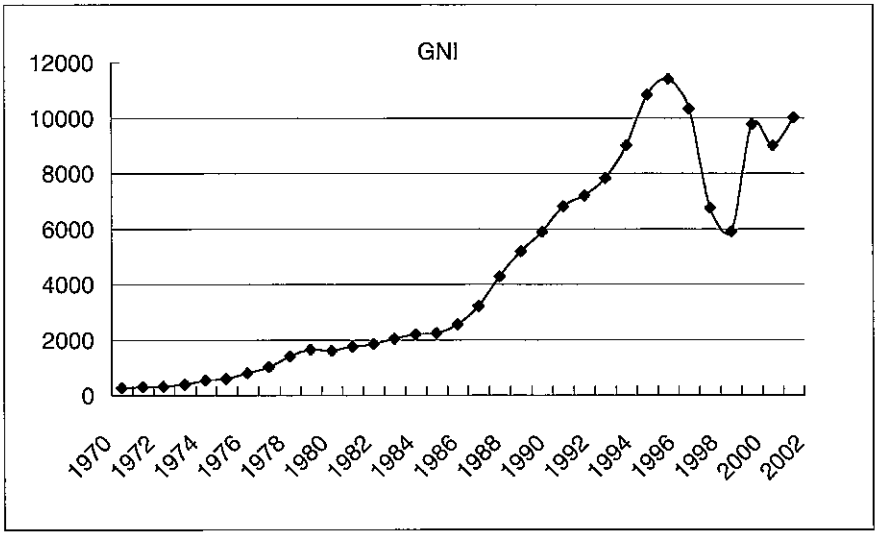

Fig. 1. Per Capita GNI of Korea

Korea is a land of diversity. The nation has thriving industries such as auto-making and shipbuilding, as well as developing and underdeveloped areas such as agriculture and international contribution. The pace of change is rapid and dynamic in Korea, as the nation moves in what is hoped to be a positive direction. The Korean economy has evolved from a war-stricken ruin into a highly developed entity. In the course of development, Koreans worked assiduously to change rural areas through a national campaign known as 'Saemaul Undong', and to host significant world sporting events such as the 1988 Olympics and the 2002 World Cup together with Japan. With the development of the country, the per capita GNI has increased from US$200 in 1970 to $10,000 today, with only a brief loss of momentum in the late 1990s.

FROM ODA RECIPIENT TO MODEST ODA DONOR

From the beginning of the last century, Korea received a total of US$12.7 billion in Overseas Development Assistance, both in tied and untied forms. Most was provided from the 1970s, and the nation graduated from the school of recipients in 1999. Ninety-seven percent of the ODA came in the form of bilateral contribution from the United States (49% of the total) and Japan (41%). Other ODA donors included nations such as Germany, France, and Austria, and international organizations such as IDA, the World Food Policy, and UNDP. The main use of ODA has been to develop human resources.

When Korea started providing small amounts of ODA in 1987, it became the only ODA recipient ever to evolve into a donor. The amounts donated have been relatively small: as of the year 2002 Korea provided only US$2.26 billion, or the equivalent of 17% of the benefits the nation has received. When ODA is expressed as a percentage of GNI, Korea provides only 0.06%, or less than one-tenth of the contribution recommended by the United Nations (0.7%). Other donor countries with economies on a similar scale

Table 1. Japanese ODA contribution to Korea

Year	Total	Tied	Untied
~'70	753.24	749.28	3.96
'71~'75	1,380.67	1,359.80	20.87
'76~'80	1,086.32	1,065.00	21.32
'81~'85	1,490.24	1,490.00	0.24
'85~'90	1,792.04	1,791.19	0.85
Total	6,502.51	6,455.27	47.24

contribute substantially more: the Netherlands donates 0.82%, Spain 0.25%, and Australia 0.25%. On a per capita basis, Korea's contribution amounts to US$6, again, less than one-tenth of the per capita average in all OECD countries. Further, two-thirds of the ODA from Korea is provided in a tied form. Korea must dramatically improve the quality and increase the scale of its ODA contributions.

Under the policies of its government, the nation seeks to contribute to current efforts towards the Millennium Development Goals and to take the responsibility as a member of the world community. Its immediate targets are to increase the ODA/GNI ratio from the current 0.06% to 0.1%, to more than double its current per capita contribution, and to increase the component of untied ODA to more than half of the total by 2006.

Korea will also be increasing humanitarian funds and setting up a legal system as an alternative form of the International Development Act, or ODA Charter.

ODA in Korea is not being implemented in a coordinated or concerted fashion. Tied ODA is endorsed by the Ministry of Finance and Economy in consultation with the Ministry of Foreign Affairs and Trade, and finally approved by the Export-Import Bank of Korea. The implementation of untied ODA is endorsed by the Ministry of Foreign Affairs and Trade, and left in the hands of the Korean International Cooperation Agency—KOICA, the Korean version of JICA. A number of other entities engage in technical cooperation programs independently, without coordinated control or KOICA supervision. Korea clearly needs a new paradigm in this area.

KOICA, the main engine of untied ODA, is entrusted with the following six missions: to develop projects, to invite trainees, to dispatch experts, to support Korea's overseas volunteer activities, to provide equipment to other countries, and to support NGOs.

THE RURAL DEVELOPMENT ADMINISTRATION (RDA)

The Rural Development Administration is the main engine in international agricultural research collaboration. Organizationally, the Administration is made up of the National Agriculture Research and Extension System, 10 research institutes, 1 educational agency, and 4 bureaus and offices in the headquarters. These facilities employ about 2,063 men and women, including 1,146 researchers (350 with doctorates), 71 extension staff, and 846 supporting staff. As a beneficiary of considerable ODA support in former years, the RDA has been able to develop the infrastructures, human resources, and technical resources required to solve key agricultural issues. Many of the facilities and equipment in place today were partly financed by ODA from other countries.

The RDA-Japan agricultural research has been the most active of the RDA's overseas collaborations in agriculture. In 1994, the Administration completed three major projects with Japanese ODA: (1) Breeding new rice varieties, (2) Study on the preventive measures against natural disasters, and (3) Study on the soil properties under the multiple cropping system. Since the completion of those projects, however, the collaborations between Korea and Japan have dwindled. Limited examples include a scientist exchange program on many minor research topics, and a joint committee held annually between ministries from the two nations. Strengthened collaborations with a focus on region-specific problems such as the multifunctionality of rice farming and environment-friendly agriculture would yield great benefits and could be funded on an equal cost-sharing basis.

RDA'S TARGETS IN INTERNATIONAL AGRICULTURAL COLLABORATION

The RDA engages in international collaboration to learn new technologies, to share what it has learned,

to develop human resources of its own and of its partners, to solve country- and regional-specific problems, and to contribute to the world community. The Administration is currently involved in bilateral collaborations with developed countries (the U.S.A., Japan, the EU countries, Israel, etc.), developing countries (China, Philippines, Vietnam, Nepal, Thailand, Indonesia, Cambodia, etc.), and former CIS countries (Russia, Uzbekistan, etc.).

Collaborations with the International Agriculture Research Centers (IARCS) are somewhat more limited, primarily due to lack of funds. Projects focused on internationally important topics and the acquisition of new technologies are now underway in collaboration with the Asian Vegetable Research and Development Center (AVRDC), the Food and Fertilizer Technology Center (FFTC), and seven CGIAR Centers (IRRI, CIP, CIMMYT, IPGRI, ICRISAT, ILRI, ICARDA). The RDA also organizes meetings and workshops to share its technologies, and dispatches its scientists to support research undertakings of international centers, including the IRRI, CIMMYT, CIP, IPGRI, AVRDC, and others. Dispatched scientists additionally act as liaison officers to develop research collaboration between the RDA and IARCS.

Two of the RDA's collaborative projects with IARCs target assistance to North Korea. In the first, RDA and the International Potato Center jointly organize a training course in potato seed production for North Korean scientists. In the second project, still being planned, RDA and AVRDC will train North Korean scientists to provide seed production technologies to promote North Korean agriculture.

FUTURE PROSPECTS

The RDA's future prospects in international agricultural research may well resemble what Japan has already been exporting for several years. RDA will work with other stakeholders and developing countries yet to be explored as partners to achieve sustainable agriculture and the Millennium Development Goals. In doing so, its closest counterparts will be the other countries of Asia, including North Korea, and selected CG centers such as ICARDA. Collaborative areas will be studied carefully, and more global issues, such as the Challenge Programs of the CGIAR, will be addressed.

Korea has benefited tremendously from international collaborative research to solve regional agricultural problems. Through the contributions of many stakeholders, not least among them the International Rice Research Institute, the nation has realized self-sufficiency in rice—a Green Revolution of its own. In the coming years, Korea will have to build new paradigms to repay the world community for the benefactions it has received.

Fig. 2. The monument of Korean green revolution set up in RDA