

AICAF

Association for International Cooperation of Agriculture and Forestry

Proposals on development cooperation for agriculture and rural areas in Africa For TICAD III

1. Need to expand agricultural production in Africa
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Proposals on development cooperation for agriculture and rural areas in Africa

For TICAD III

August 2003

Prior to the third round of the Tokyo International Conference on African Development to be held in late September in Tokyo this year, the Association for International Cooperation of Agriculture and Forestry (AICAF) presents the following proposals.

President of Association for International Cooperation of Agriculture and Forestry,
Kenichi Kakudo

Proposal 1: Need to expand agricultural production in Africa

The current necessity for the development of Sub-Sahara Africa (herein after referred to as "Africa") is to find a way to expand agricultural production to cope with the increasing population.

Sustainable growth of agricultural production is necessary to achieve the goals to improve food self-sufficiency rate, ensure food security, reduce the number of undernourished people and decrease poverty. It can also serve as a driving force behind currently stagnant economic growth. However, the production cannot catch up with the pace of the population growth and continuing stagnation of agricultural production per capita is a basic problem for development in Africa.

Although there are many factors behind the condition, including Africa's historic standing and natural environment, what is necessary for us today is to work effectively as international society in accordance with the ownership of Africa itself.

Fortunately, as shown in the cases of the G8 Africa Action Plan adopted in recent FAO summit meetings in Rome and Kananaskis and Evian Summit meetings, the significance of agricultural production increase for the development in Africa has begun to be emphasized.

We believe that Japan should support such international trend actively and work on this issue as an important one in compiling nation-by-nation support plan in Africa.

(Reference)

1. Agricultural production in Sub-Sahara Africa

1.1 Production of main crops per capita

	Rice	Maize	Sorghum	Millet	Roots & Tubers	Total
Production in 1970	4,710	11,790	10,350	8,000	123,950	158,800
Index	(100)	(100)	(100)	(100)	(100)	(100)
Production per capita	18.0	45.0	39.5	30.5	472.7	605.7
Yield per hectare	1.34	0.99	0.67	0.59	6.17	
Production in 1980	6,110	13,870	11,190	7,590	137,150	175,910
Index	(130)	(118)	(108)	(95)	(111)	(111)
Production per capita	17.6	40.0	32.3	21.9	395.9	507.7
Yield per hectare	1.35	1.14	0.86	0.66	6.74	
Production in 1990	9,720	23,400	13,070	10,590	208,930	265,710
Index	(206)	(198)	(126)	(132)	(169)	(167)
Production per capita	20.9	50.3	28.1	22.8	449.4	571.5
Yield per hectare	1.65	1.19	0.73	0.67	7.73	
Production in 2000	11,600	27,090	18,220	13,230	312,900	383,040
Index	(246)	(230)	(176)	(165)	(252)	(241)
Production per capita	19.1	44.6	23.0	21.8	515.0	623.5
Yield per hectare	1.66	1.28	0.83	0.66	8.28	

Note 1) Sub-Sahara Africa: 48 countries including South Africa.

Note 2) Roots & Tubers crops include cassava, yam, potato, sweet potato and other roots and tubers.

Note 3) Production: 3-year average: thousand tons

Note 4) Production per capita: kilograms

Note 5) Yield per hectare: tons

Source: FAOSTAT AGRICULTURE DATA

2. Examples of assessment of funds required to support agriculture in Africa

2.1 NEPAD Action Plan (July 2002)

A total of 251.3 billion dollars (17.9 billion dollars a year) was assessed to be necessary in 14 years from 2002 to 2015 as funds for agricultural development in Africa.

2.2 FAO Africa Agricultural Development Plan (May 2002)

A total of 240 billion dollars (17.2 billion dollars a year) was estimated to be needed to achieve the millennium goal in 2015.

3. Ratio of agriculture in bilateral ODA (world) among major DAC nations (1999)

Japan: 7.6%, U.S.A.: 2.3%, U.K.: 9.4%, France: 5.7%, Germany: 3.9%, Italy: 2.9%, Canada: 2.6%, Australia: 14.3%, Sweden: 3.1%, DAC average: 5.5%

Note) Food aid is excluded.

Proposal 2: Promotion of agricultural development by supporting NERICA (New Rice for Africa) and other crops

2.1 In Sub-Saharan Africa, the import of rice recently increased to 6.6 million tons in 2000, with the increase of consumption of rice. Though rice production in the area has increased to 11.6 million tons, it is very important target for African nations to increase rice production up to consumption level.

2.2 The NERICA varieties developed by the West Africa Rice Development Association (WARDA) with financial support from Japan and other countries has such characteristics as high yield, disease resistance and early maturity. It gives a new potential to upland rice cultivation which is the most prevalent type of rice production in Africa. (The area for upland rice cultivation is currently 1.9 million ha.)

2.3 To promote the diffusion of NERICA varieties, the African Rice Initiative for 17 West African nations was proposed in March 2002. FAO is also working to promote widespread production of the rice varieties in Ghana and Sierra Leone.

2.4 The problems with the promotion of diffusion of NERICA varieties are to establish a system that enables to provide a sufficient amount of seeds of appropriate quality and to set up production standards in accordance with the characteristics of the varieties and local conditions, and have farmers get accustomed to the production methods suited to the standards.

Japan, with a long history of research and extension of rice cultivation, is expected to work actively to solve the problems.

2.5 The growing area of NERICA varieties with favorable traits seems to increase. However, In order not to expand the area of slash and burn cultivation as much as possible, it is necessary to preserve the soil fertility with diversified methods including the use of leguminous plants and organic fertilizers and the introduction of livestock farming.

2.6 In the diffusion of the NERICA varieties, a production system should be examined to match the local characteristics, and to harmonize with the native upland crops as maize, millet and sorghum, staple food of people in African rural areas. In this case, it is important to use such research outcomes as the farming system, working in cooperation with the International Institute of Tropical Agriculture (IITA) and other international agricultural research institutes.

(References)

1. Rice trade in Sub-Sahara Africa

Rice	Import volume	Import value	Export volume	Export value
1970	756	102	74	12
1980	2,404	964	18	8
1990	3,092	943	11	4
2000	6,618	1,636	59	20

Unit: Import, Export, volume: thousand tons, Import Export value: millions dollars

Source: FAOSTAT AGRICULTURE DATA

2. NERICA varieties

- 2.1 In 1994, the West Africa Rice Development Association (WARDA) succeeded in hybridization of African and Asian rice species. By 2000, it developed 3,000 upland breeding lines. It began to provide new varieties, having farmers participate in choosing varieties. Japan provided financial support and dispatched researchers in the process.
- 2.2 Characteristics of NERICA varieties are drought tolerance, high yield, disease resistance, weed competitiveness, early maturity and higher protein content.
- 2.3 In order to promote the diffusion of the rice varieties, the African Rice Initiative (ARI) was proposed in March 2002 for 17 West African nations. It made public a plan to increase the size of growing area from 24,000 ha to 210,000 ha with annual production of 750,000 tons by 2006. However, it has not taken any concrete actions yet.

3. Outline of JIRCAS's joint research on technology of soil fertility management

Research on such upland field crops as millet and sorghum, which most of the people in rural areas in semiarid tropical Africa eat as staple food, is conducted by research institutes under the umbrella of the Consultative Group on International Agricultural Research (CGIAR). Japan International Research Center for Agricultural Sciences (JIRCAS) began to conduct research in fiscal 2003 on how to manage soil fertility in the upland field crop production areas jointly with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), which is one of institutes of CGIAR.

Proposal 3: Active practice of small-scale irrigation agriculture

3.1 In order to increase agricultural production in Africa, it is important to spread irrigated rice agriculture that has the potential of relatively high yield (more than 3t per hectare). In this case, it is effective if small-scale irrigation farms which are relatively easily managed by farmers are spread in rain fed lowland(valley bottom) (currently irrigated area is 1.65 million ha and area available for irrigation is estimated as 11 million ha). This comes from the experiences in agricultural development survey on rice cultivation in Sub-Sahara Africa conducted by our association (AICAF) for the last decade. In the case of the Food for Work program which the World Food Program (WFP) has conducted in Côte d'Ivoire since 1999 financially backed by Japan, farmers repaired small dams, irrigation canals and developed rice paddies by themselves in cooperation with extension groups. This is said to be a case in which development of rice paddies was carried out at low costs and strong sense of participation was nurtured among farmers.

3.2 For the sustainable development of irrigated farming, it is necessary to have a socioeconomic system that helps encourage farmers to participate actively, such as water reservoir, fertilizers and other materials, financial systems, extension, roads and other infrastructure. Concerned nations should be fully aware of this and formulate agricultural policy, and donor countries should make efforts to provide cooperation for irrigated farming efficiently and effectively, working in cooperation with each other.

3.3 We propose the establishment of an African rice agriculture extension center (tentative name,) funded by Japan, as a base for extension of rice farming in Africa. A group of specialists in rice production will be dispatched to the center from Japan and they will conduct experiments of rice production and extension activities by making use of WARDA's research outcomes and supported by local researchers and extension workers.

The center will be used jointly by neighboring nations for experiments to find out Africa-style rice production suitable to its natural and social environments and for extension activities and training concerned.

(Reference)

1. Outline of AICAF's project for sustainable agricultural development in Africa

The project was carried out in four countries of Côte d'Ivoire (1992-1994), Tanzania (1995-1997), Zambia (1995-1997), and Malawi (1998-2000). One area of rice paddies at valley bottom for survey in each country was selected and a development plan was formulated for agriculture based on small-scale rice cultivation. In the project, with participation of farmers, demonstration tests including fertilizer application tests, construction of irrigation facility and formation of farmers' organizations, were conducted.

2. Outline of WFP project in Côte d'Ivoire

With Japan's trust fund, WFP conducted a project in four provinces in northern Côte d'Ivoire from 1999 to the end of 2002. About 10,000 small-scale farming households in valley bottoms were subject of the project. The farmers provided labor force to restore small dams and water reservoir, develop and repair irrigation canals and develop farmland (with a goal of 1,700 hectares). The farmers received three kilograms of rice in exchange for one-day labor (Food for Work) and as a result, the field system of irrigation farming was established with farmers' participation.

3. Outline of JICA cooperation for irrigation agriculture in Africa

Cooperation projects of the Japan International Cooperation Agency (JICA) for irrigation farming in Africa began with the Kilimanjaro Agricultural Development Programme (KADP) in Moshi, Northern Tanzania (1974-1993) and include the Water Management Improvement Project in the Nile Delta (1981-1998), the Lower Anambra Irrigation Project in the Federal Republic of Nigeria (1989-1993), the Mwea Irrigation Agricultural Development Project in Kenya (1991-1998), the Agricultural machinery training project for irrigated rice cultivation in Ivory Coast (1992-1997), the Kilimanjaro Agricultural Training Center Project in Tanzania (1994-2006) and the Small-Scale Irrigated Agriculture Promotion Project in Ghana (1997-2004).

Proposal 4: Introduction of technical innovation to traditional food crops in Africa

4.1 In order to expand agricultural production in Africa to cope with population increase at the annual rate of more than 2 percent, it is necessary to increase production by increasing yield per unit of land through improvement of varieties and production methods, because it is questionable whether it is possible to increase the growing area at the past pace. This means that the yield of such African traditional food crops as maize, millet, sorghum, cassava and legume should be increased by growing better varieties and improving production techniques. Research of these crops is mainly conducted by research institutes (including IITA, ICRISAT and CIAT) under the umbrella of CGIAR. For the advancement and acceleration of the research, it may be necessary to improve international research support systems including research capacity of donor nations.

4.2 For example, to promote breeding of better varieties, it is useful to assess the international trend of breeding research for each crop and provide concerned information for breeding researchers, governments of donor nations and international development organizations including the World Bank. If necessary, the review of the research system will be proposed. Although CGIAR and other international organizations would perform such functions, Japan could support such roles and be responsible for some of the functions.

(Reference)

Japanese contribution to research food crops in Africa

- (1) Japan provided WARDA with trust fund for the research and dispatched researchers.
- (2) JIRCAS, succeeded in isolating genes resistant to environmental stress from Arabidopsis and Asian rice is making joint international research to introduce these genes to several main crops.

Proposal 5: Promotion of rural development cooperation

5.1 The aims of cooperation for rural development are not limited to the expansion of agricultural production. They also include the decrease of the number of the people in poverty. Promotion of rural development cooperation includes the improvement in infrastructure for rural life, such as water systems, medical care, education, roads and prevention of desertification, and also nurturing agriculture-related economic activities that can provide employment and income. One example of means of the latter is to grow or keep such product as vegetables or small livestock animals for local market by using resources that are easily available.

In dealing with such issues properly, projects should conform to the intentions of local people and donor nations are to work in full cooperation. In this field, NGOs at home and overseas have made achievements and there are strong expectations for Japanese NGOs.

5.2 The following are examples concerning agriculture:

Regarding water, it is necessary to study the effectiveness of small water resources development projects which include the provision of domestic water.

Regarding elementary education, school lunch is used as a means to spread education on a trial basis, and various possibilities to spread education are to be examined.

Proposal 6: Arrangement of function of support organizations for agriculture and rural area cooperation in Africa

- 6.1 Many African nations have recently accepted so called structural adjustment policies, withdrawing from agricultural support programs. It seems difficult for their governments to implement suitable agricultural promotion policies. Against such a background, accepting governmental officials in charge of agricultural policies of major African nations to Japan for a certain period and providing training on the process of Asia-style economic development in which agriculture served as the basis for economic development, with cooperation from government officials from Asian nations will largely contribute to capacity building of African governments. Organizations that can provide practical support for such training need to be prepared.
- 6.2 Forming network that enables exchange between Japanese and African high-ranking government officials in charge of agricultural policies is beneficial to the smooth promotion of agricultural cooperation. To do so, it is possible to dispatch high-ranking government official who have been in charge of agricultural administration or experts from Japan to local governments as advisors. It is necessary to make a system to support the advisors, by sorting out situation of agricultural policies of each African nation and setting up how Japan will handle the situation.
- 6.3 In order to respond to a wide variety of demand for human resources necessary for agricultural and rural development cooperation in Africa, it is necessary to improve the data bank of international cooperation specialists with a list of a wide variety of personnel including agriculture-related officials of the national and prefectural governments, university staff and people in private sector.
- 6.4 It is necessary to set up conditions for the provision of local information, exchange between local NGOs and NGOs from other donor countries and technical training so more Japanese NGOs will be able to be involved in agricultural and rural development cooperation in Africa.
- 6.5 It is meaningful to work in cooperation with concerned organizations, NGOs and private organizations to hold symposiums, raise funds and conduct publicity activities in order to gain people's understanding on and support for agricultural and rural development cooperation in Africa.
- 6.6 It is necessary to upgrade domestic private organizations so they will be able to play various roles described above.

(Reference)

Some of Japanese NGOs providing agricultural and rural development cooperation in Africa

- The Institute of Cultural Affairs: Japan (ICA)
(Ivory Coast, Kenya, Zambia: agricultural promotion)
- Association for Cooperation and Rural Self-support in West Africa (CARA)
(Mali: vegetable production, lifestyle improvement)
- International Development Frontier Organization
(Ghana: sustainable agricultural management system)
- Sasakawa Africa Association (Guinea, Ghana, etc.: corn, rice)
- Association of Support for People in West Africa (SUPA)
(Guinea: organic fertilizers)
- Earth Greenery Activities Japan (EGAJ)
(Tanzania: farming methods using termites)
- Action for Greening Sahel (AGS-Japan)
(Burkina Faso, Chad: vegetables, improved kitchen range, afforestation)

APPENDIX

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