

# African Agriculture and Japan's Cooperation

Ministry of Agriculture, Forestry and Fisheries (MAFF)

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# World Trends Surrounding Agricultural Products

## Soaring Food Prices

—Compared to the price in Autumn before last  
Prices of Wheat and Rice, Maize and Soybean increased  
**2.4, 2.6, 2.5 times respectively.**

Direct Serious Damage to the Poor  
< Expansion of **Hunger** and **Malnutrition** >

**Agriculture is a main industry in many  
developing countries.**  
Improvement of productivity and expansion of  
production in agriculture are important.

# Current Situation of African Agriculture

(major grain , particularly rice)

# Food Supply in Africa

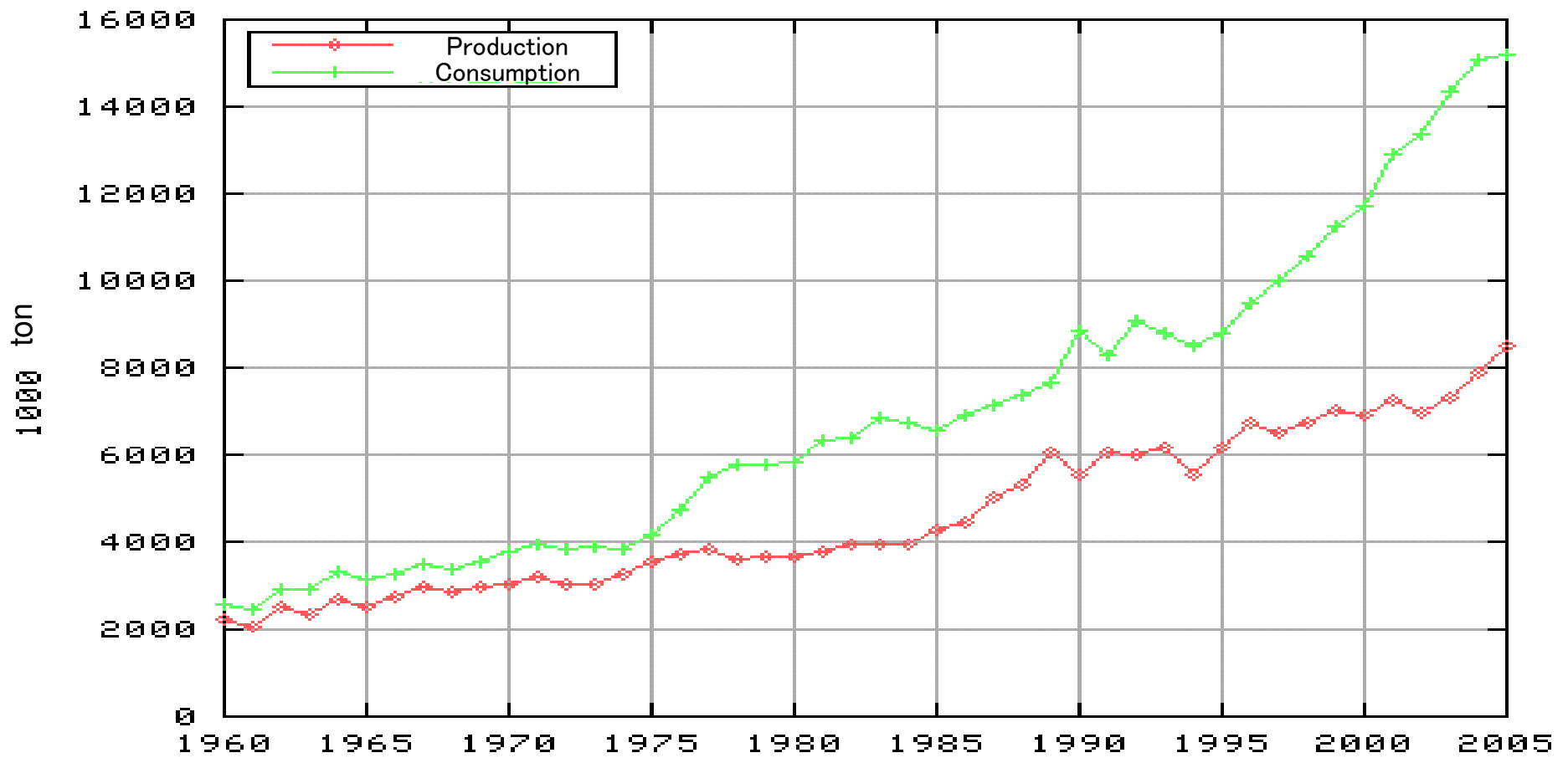
- Maize, Cassava, Rice and Sorghum are major calories source. However, self-sufficiency rate of Rice is still low.

Region	Per capita provided calories (Kcal/day)	Top 4 Products			
		Name of Products Kcal/day Self-sufficiency rate(%)			
		No.1	No.2	No.3	No.4
Sub-Sahara Africa	2,218	Maize	Cassava	Rice	Sorghum
		328	270	193	188
		93.0	100	55.2	99.4
East Africa	2,008	Maize	Cassava	Wheat	Rice
		503	186	183	123
		92.6	100	36.6	71.3
West Africa	2,578	Rice	Millet	Sorghum	Cassava
		342	277	276	248
		50.0	100	100	100
Central Africa	1,876	Cassava	Maize	Wheat	Rice
		654	214	119	85
		100.0	87	0.6	47.8
South Africa	2,364	Maize	Wheat	Sorghum	Milk
		731	295	112	93
		45.0	34.3	76.6	63.0

Source : FAOSTAT

# Rice Production and Consumption in Africa

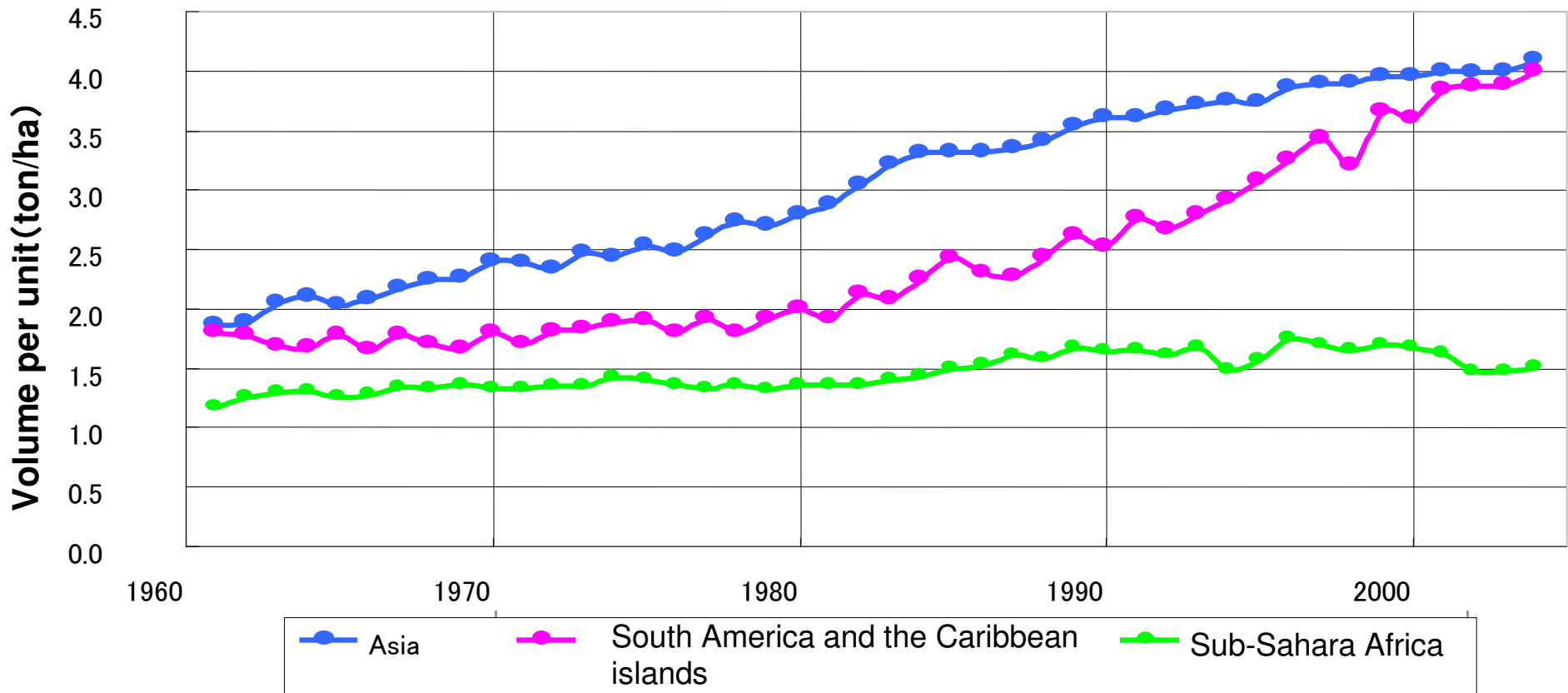
- Production does not meet growing demand.



# Rice Productivity in Africa

## ● Slow Productivity Improvement

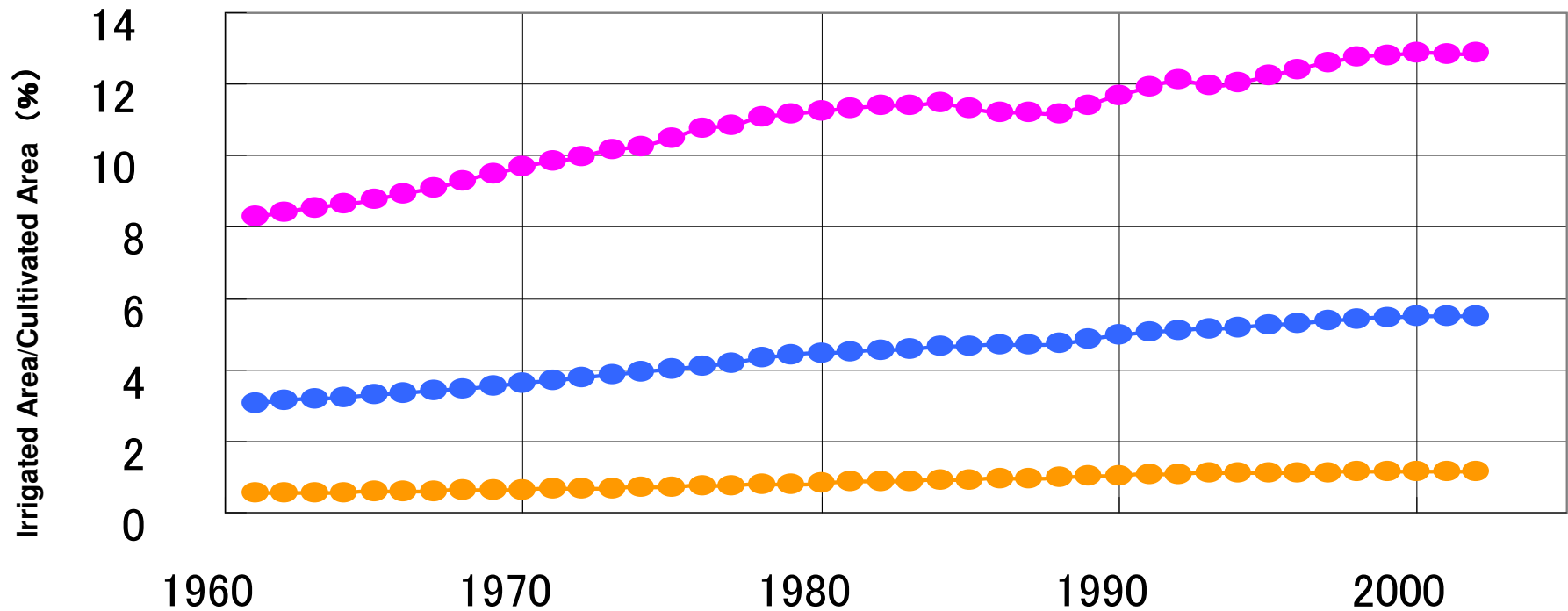
Productivity Trend



Source: FAOSTAT

# Irrigation Area in Africa

- Less land are Irrigated in comparison to other region



World Average —●— Developing Countries in Asia —●— Sub-Saharan Africa —●—

Source: FAOSTAT

# Japan's Cooperation in Agriculture



# Research and Development for Rice Productivity in Africa

## Development of new rice varieties

### ● Nerica (New Rice for Africa)

Asian Rice



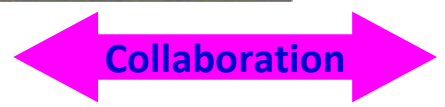
African Rice



### ○ Strong point of Nerica

- Early Maturing
- High Yield

### ● JIRCAS



### WARDA

### ○ (progress) Research and Development of Rice

- JIRCAS has dispatched researchers to WARDA since 1998.
- JIRCAS has implemented collaboration research with WARDA on bad environment adaptability of indigenous genetic resources in Africa.



The lack of water in the later stage caused no ripening of Nerica (BENIN)

### ○ (hereafter) Breeding of Rice including Nerica suited to Africa.

- Addition of drought/submergence tolerance

JIRCAS : Japan International Research Center for Agricultural Sciences  
WARDA : Africa Rice Center



**Possibility of Expansion of Rice growing area**

# Cooperation for Increase of Rice Production in Africa

## Support for Increase of Rice Production

● Support for technical development and extension of sustainable rice cultivation technique (Low cost , High Yield) in lowlands of African inland .

(provide trust fund to **WARDA** )

### ○ institutions concerned

WARDA、IWMI、each government's research and extension organization etc.

### ○ approach

- Selection of model site and pilot project for sustainable and low cost cultivation technique of rice .
- Collaboration with institutions concerned and demonstration of pilot model.
- Extension of African style technical system by training etc..



Lowlands of Nigeria inland (source: Kinki University' HP)

IWMI : International Water Management Institute

**Formation of new rice area and increasing of rice production**

# Development of Small-Scale Irrigation through the Participation of Farmers

## Support for Dissemination of Rice Cultivation with Small-Scale Irrigation Collaboration with WFP

- Sustainable Farming System for Self-Sufficiency introduced by Following Measures
  - ① Agricultural Infrastructure Development by Farmers
  - ② Food Aid in Exchange of Work (Food for Work (FFW))
  - ③ Approach for Plan, Implementation and Management through the Participation of Farmers
  - ④ Agricultural Development at Community Level (10-30ha)



Land Reclamation



Development of Paddy field



Construction of Irrigation

## Results

- Increased harvest by Development of Paddy Field through the participation of Farmers

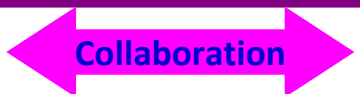
Country	2006		2007	
	Development Area(ha)	Production Volume(t)	Development Area(ha)	Production Volume(t)
Mali	105	525	210	1,050
Burkina Faso	75	133	195	346

Source:WFP

# Research and Development for Beans

## Selection of improved dual-purpose cowpea varieties suitable for Sahel

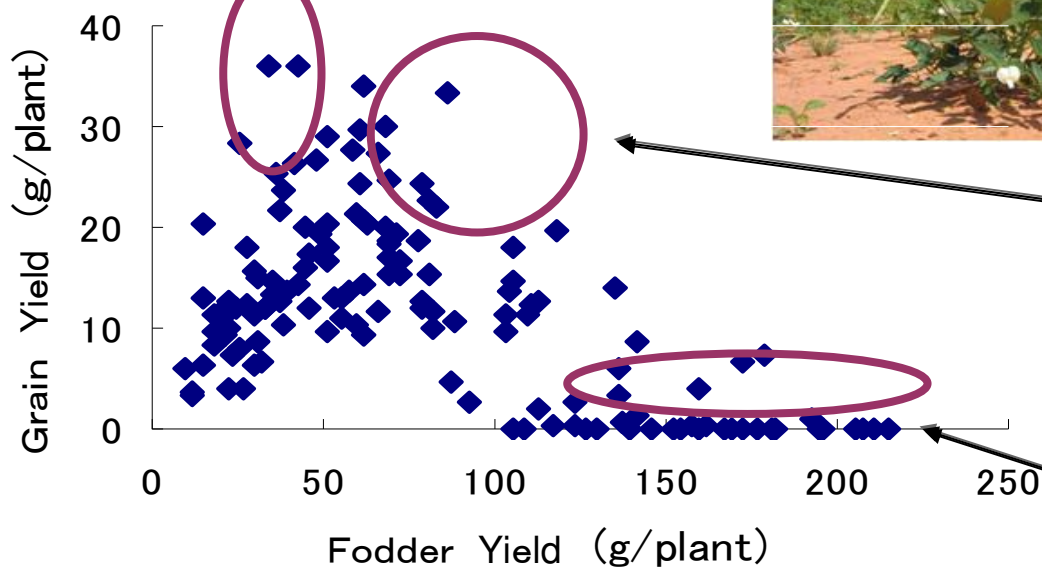
● ICRSAT  
(Niger)



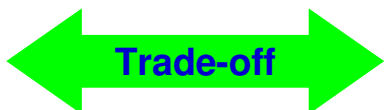
JIRCAS



ICRSAT : International Crops Research Institute for the Semi-Arid Tropics



▪ Grain yield



Leaf & Stem yield

▪ Cowpea varieties



3 varieties for dual-purpose



Saving both Food and Fodder

# Support for Development of Human Resources and Organizations for Improvement of Productivity

## Holistic Support to Farmers through transfer of Knowledge and Expertise of JA (Japanese Agricultural Cooperatives )

- Farm Management, Life Support  
Agricultural Business ,Group Purchase/Marketing, Sharing Agro-Processing Facility, Banking
- Support of Farmers Activity  
Farmers Market, Promotion of Local Product
- JA (Japanese Agricultural Cooperatives) Network  
Broad Network from Village to National Level

### Training in Japan

Accept trainees from developing countries



Training on Poverty Alleviation

Practice of Agro-processing

### Post Training Follow-up

Dispatch experts for post training follow-up



Discussion with Extension Workers (Malawi)

Rice Processing in a cooperative (Malawi)

# Priority Issues of Agricultural Sector at TICAD IV



Basic Message

For Energetic Africa

## Priority Issues

Acceleration of Development

Ensuring Human Security

Actions on Environment and Climate Change Issues

### 1. Improvement of Productivity and Expansion of Production

- Dissemination of Rice Crop Technology and Development of Paddy farming in lowlands and wetlands
- Sustainable Supply of Agricultural Water through Development and Renewal of Irrigation
- Promotion of Organizing Farmers

### 2. Research and Development

- Improvement of NERICA and Development of Drought-tolerant and High Yield Varieties
- Development of Agricultural Researchers in Africa



Toward "Green Africa"