

Comment to “*DEALING WITH AFRICAN DEVELOPMENT DEFICITS*”



Dewi Sri, Goddess of Rice

February 25, 2008



YAMAJI Eiji

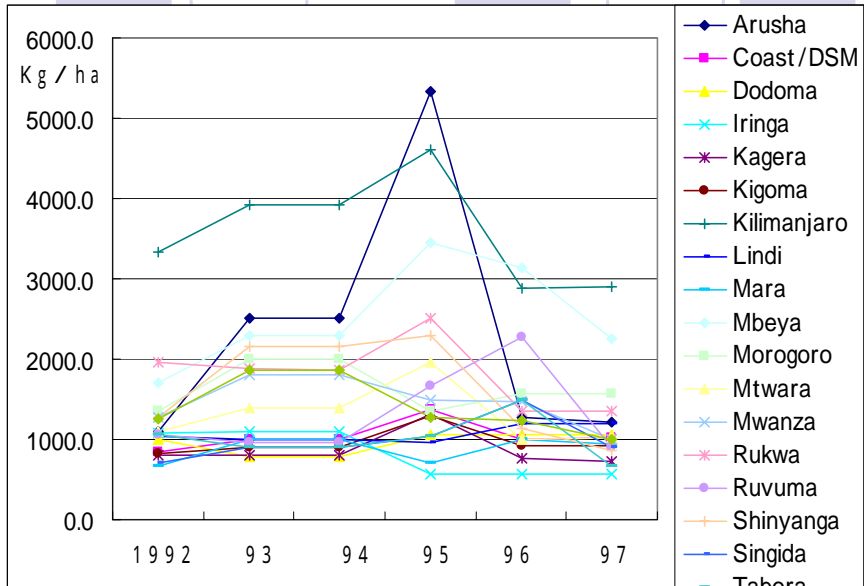
yamaji@k.u-tokyo.ac.jp



Africa and Asia

(Nr)	GNP	Baby Mortality
Africa(53)	920 \$	91/1,000
Asia(47)	4,871 \$	44/1,000
Asia, excluding Japan, Singapore and Oil producing countries	2,052 \$	49/1,000

Rice Yield by State in Tanzania



(Source: KADC)

Prof. Uphoff Lecture at FASID

Lower Moshi Area



Baobabu

Irrigation Area 2,090ha,
Rice 1,100ha (rainy) ,800ha (dry)

Prof. Uphoff Lecture at FASID

Lower Moshi



Main water gate at Kikuletwa river

Prof. Uphoff Lecture at FASID

Lower Moshi, farmers association



Production Cost

38,000 TSh/season/0.3 ha

- Water 10,000 TSh
- Tillage 20,000 TSh
- O&M 4,000 TSh
- Other 4,000 TSh

- Association for Regulation of Irrigation Water. Exchange of Information
- Variety IR64, IR54, IR36
- Yield 6-7 ton/ha
- Selling Price 52,000 TSh/170 kg

Prof. Uphoff Lecture at FASID

Mwijanga Broken Weir and Tentative Repairment



- Using Natural materials

Prof. Uphoff Lecture at FASID

Mwijanga



- Irrigation Area from 125 ha to 420ha
- Paddy Irrigation Area is 125ha
- Water is not enough
- Many KATC trainees



Kikafu Chini



Constructed in 1998, UNDP aid

Prof. Uphoff Lecture at FASID

Kikafu Chini

- Irrigation Area 291 ha
 - 231 ha Upland, 60 ha Rice
- Irrigation Cost
 - Rice 6,000 TSh/0.4 ha/season
 - Upland 4,000 TSh/0.4 ha/season



Prof. Uphoff Lecture at FASID

Kikafu Chini : Upland crops

- maize, bean, banana, tomato, okra, sunflower and cosmos



Maize



Banana



Sunflower



Cosmos

Prof. Uphoff Lecture at FASID

Kikafu Chini : Unmatured Techniques



Introducing Rope

- Plot: 30 x 50 m
- All by Hand
- Plot-to-plot irrigation
- Two Seasons : Jun-Dec, Dec-Jun
- Yield 4.5 ton/ha
- Selling Price 48,000 TSh/170 kg

Prof. Uphoff Lecture at FASID

African Rice Production

- Cultivation system is usually simple.
- Only in a few places, cultivation management is modern and intensive.
- Modern cultivation technique is now spreading gradually.
- Before introducing SRI, more basic things should be done.

Prof. Uphoff Lecture at FASID

System of Rice Intensification



Source : SRI Homepage <http://ciifad.cornell.edu/sri/index.html>

Made by Shimizu Keisuke (2008)

Prof. Uphoff Lecture at FASID

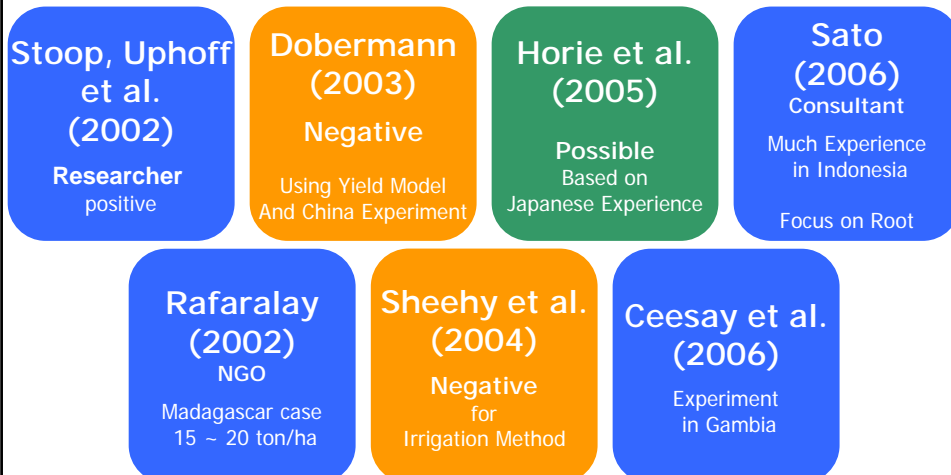
System of Rice Intensification

Country	SRI (non SRI)	Country	SRI (non SRI)
Bangladesh	6.3 (4.9)	Madagascar	7.2 (2.6)
Cambodia	4.8 (2.7)	Myanmar	5.4 (2.0)
China	12.4 (10.9)	Nepal	8.5 (4.2)
Cuba	7.4 (4.3)	Philippines	6.0 (3.0)
India	8.0 (4.0)	Sierra Leone	5.3 (2.5)
Indonesia	7.4 (5.0)	Sri Lanka	7.8 (3.6)

*Sato (2006); Unhusked Rice

Prof. Uphoff Lecture at FASID

Positive and Negative Papers



Originated by Shimizu Keisuke (2008)

Prof. Uphoff Lecture at FASID

My SRI experience in Indonesia

- 2004.10 Survey on Irrigation
- 2006.1 first visit to SRI near Jakarta
- 2006.5 Sadang Yield survey
identified much yield
- 2006.8 Kerara Kalaloe yield survey
- 2006.12 visit Lombok test site
- 2007.3 Brantas irrigation
- 2007.5 start experiment
at Lombok test site

Still need to research to identify the mechanism

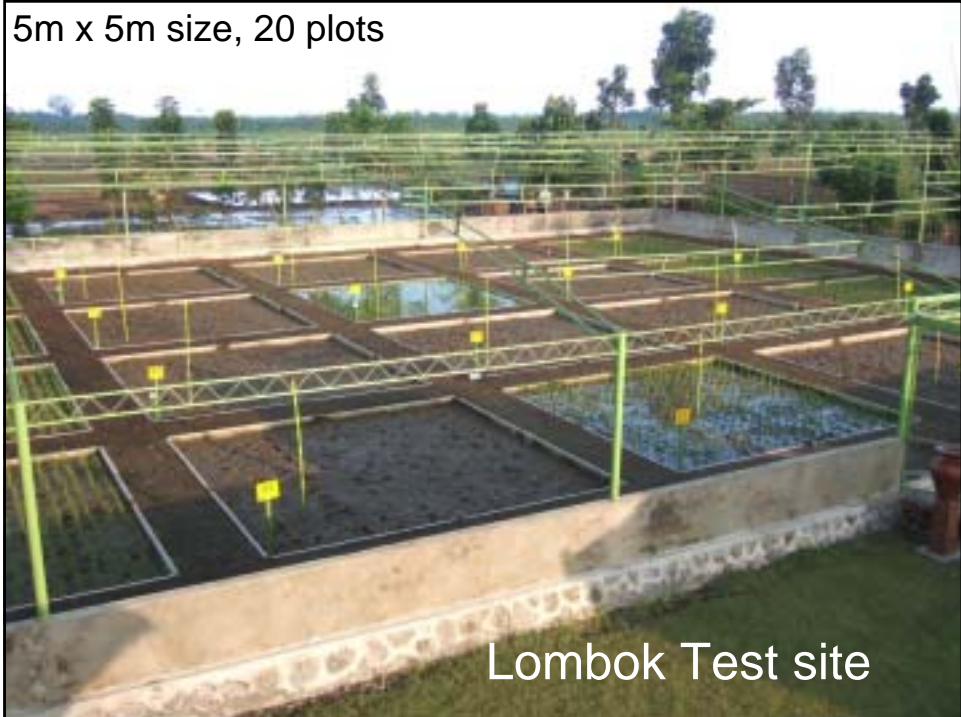
Prof. Uphoff Lecture at FASID

Lombok test site

- 2006/2007 Rainy Season
focus on Density
- 2007 Dry 1 on Irrigation method
- 2007 Dry 2 plant green manure
- 2007/2008 Rainy Season **on going**
focus on plant number
- 2008 dry 1 continue experiment
- 2008 dry 2

Prof. Uphoff Lecture at FASID

5m x 5m size, 20 plots

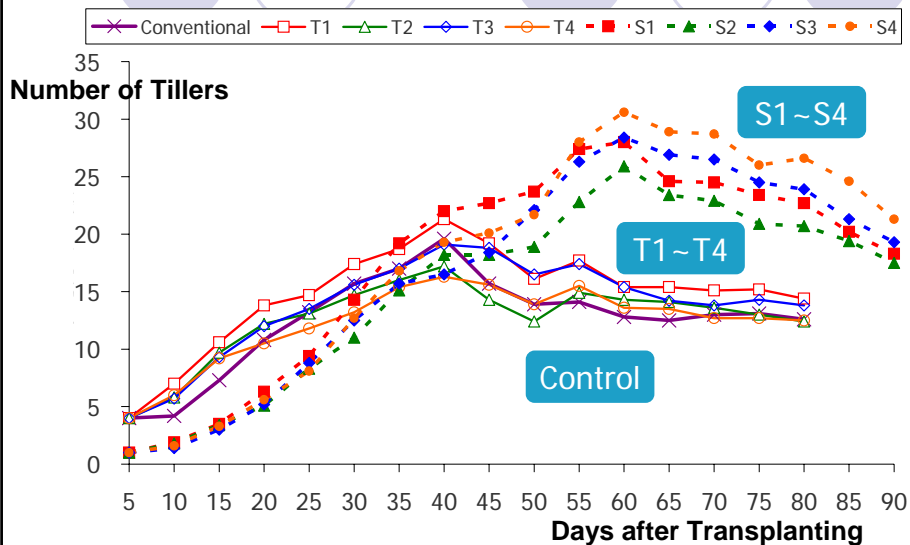


Lombok Test site

Lombok another site



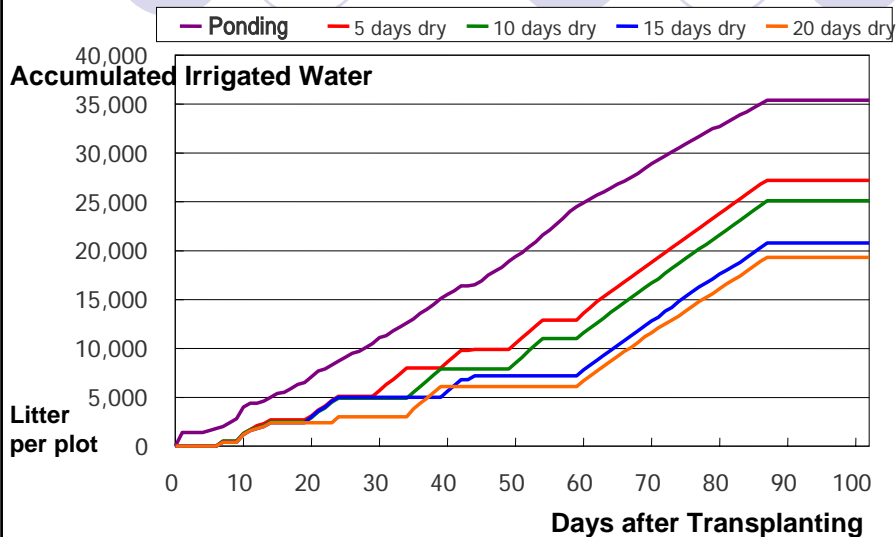
Comparison between SRI and transplant



Originated by Shimizu Keisuke (2008)

Prof. Uphoff Lecture at FASID

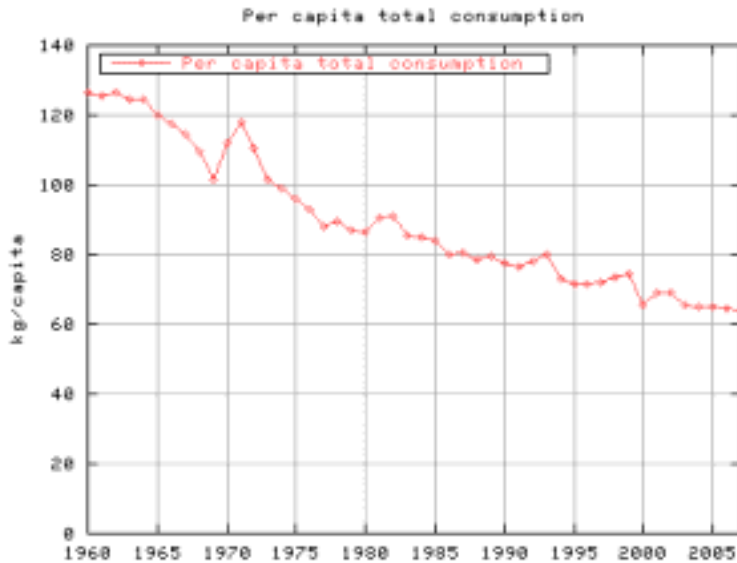
Water consumption



Originated by Shimizu Keisuke (2008)

Prof. Uphoff Lecture at FASID

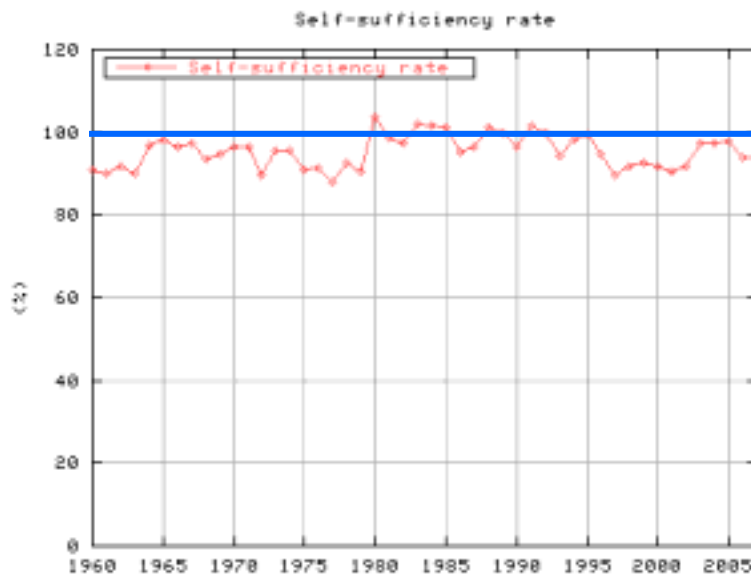
Rice Consumption per capita in Japan



From Ito Shoichi LABO

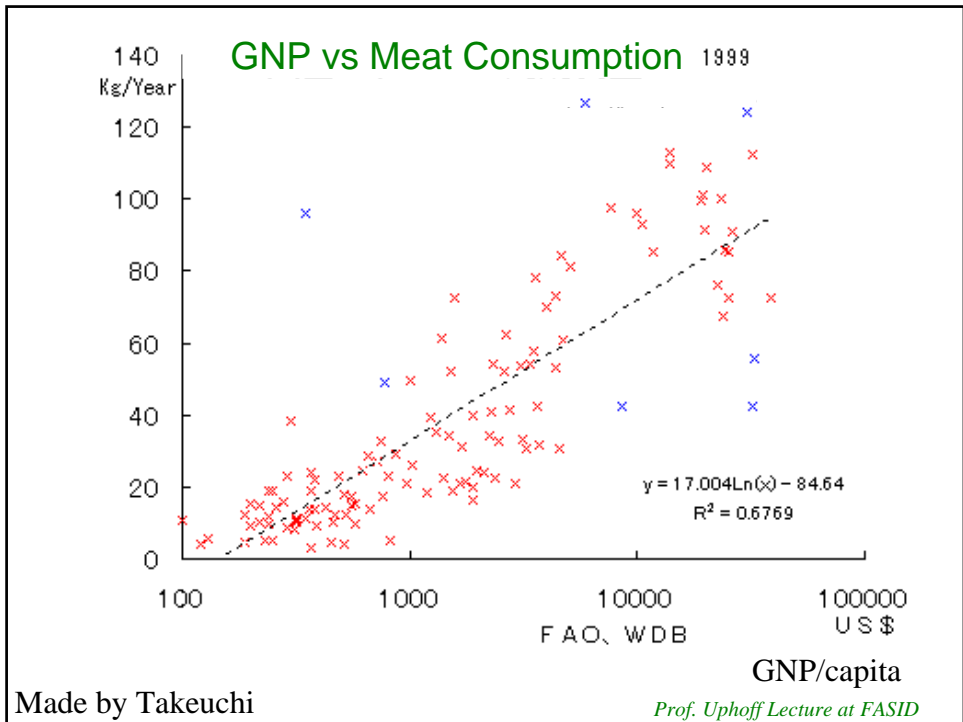
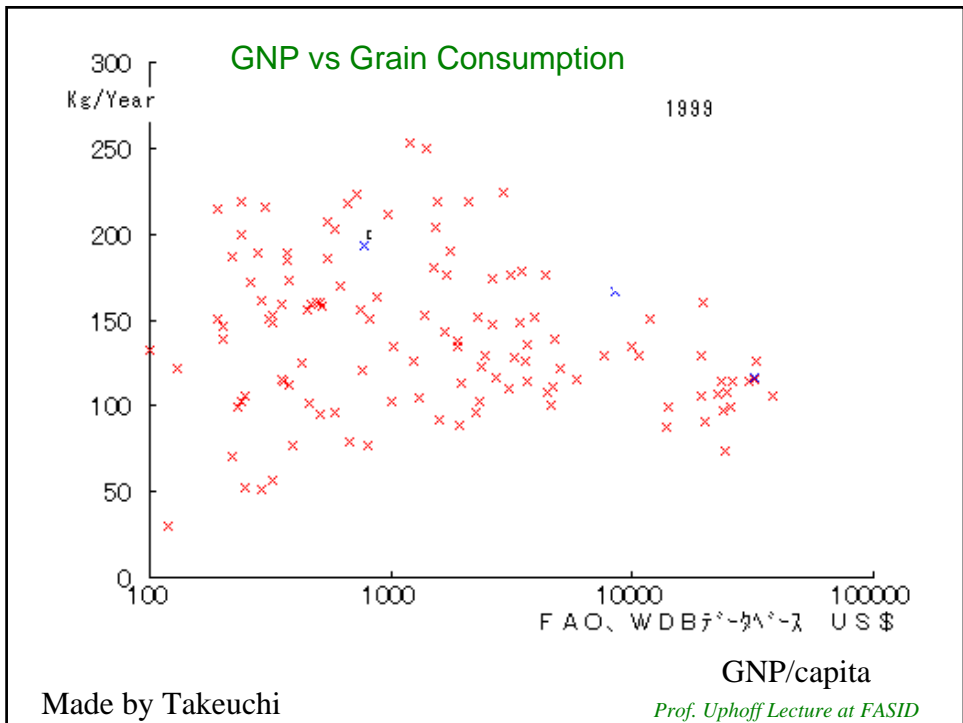
Prof. Uphoff Lecture at FASID

Self Sufficiency of Rice in Indonesia



From Ito Shoichi LABO

Prof. Uphoff Lecture at FASID



Meat production

- 192.7 million tonnes of feed



- US farm animals



- 31.2 million tonnes of meat

ratio of 6.2 to 1

Broiler chicken 3.4 to 1

Pigs 8.4 to 1

Cheese 7.9 to 1

Prof. Uphoff Lecture at FASID

Rice Growing Techniques relating SRI

	Number of Spikes	Number of Panicles	Ratio of Filled Rice	Taste	Growth in Late Stage
Transplant young seedling	increase	decrease	decrease		better
One plant per hill	decrease	increase	increase		
Transplant in sparse		increase	increase		better
Intermittent irrigation			increase		better
Organic Fertilizers				better	

Originated by Wakimoto Yuki (2008)

Prof. Uphoff Lecture at FASID