

# THE JAPAN-AFRICA BUSINESS FORUM2014

## AGRIBUSINESS

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10, June 2014  
TSUBAKI SUSUMU



# AGRICULTURE COMPARISON



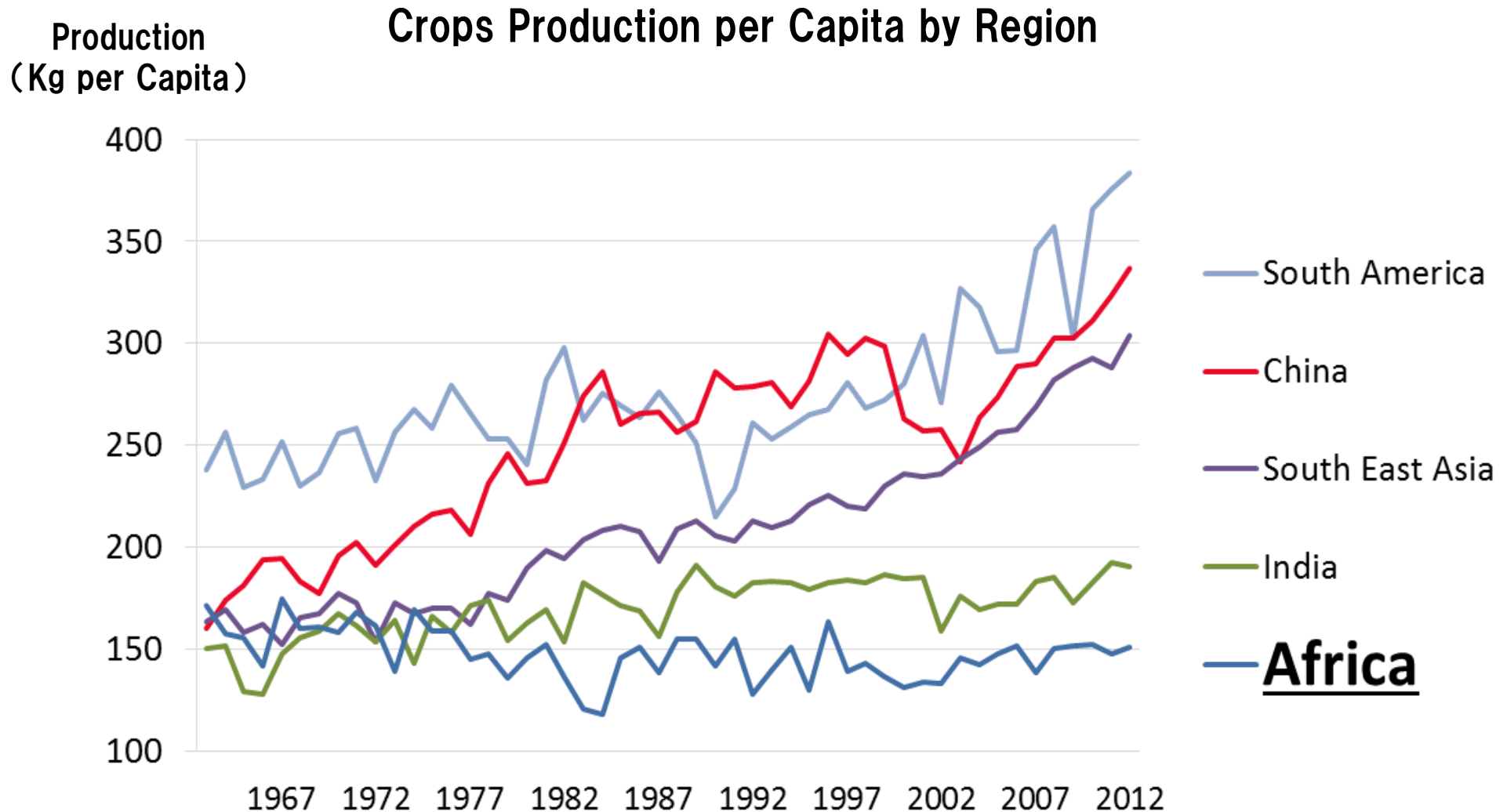
(2011)	<u>AFRICA</u>	<u>CHINA</u>	<u>INDIA</u>
Area (M km <sup>2</sup> )	30.2	9.7	3.3
Population (M)	1,057	1,399	1,221
Crop Consumption (M ton)	231	531	278
Consumption Pre capital (Kg/person)	218	380	228
Crop Production (M ton)	<u>165</u>	520	288
Production/Consumption (%)	<u>71%</u>	98%	104%
Cultivated Area (K ha)	258	126	170
Yield of Crops (ton/ha)	<u>1.5</u>	5.7	2.9
Irrigated rate (%)	<u>5.4%</u>	53%	39%
Fertilizer Consumption (kg/ha)	<u>20</u>	450	164
Tractors in use (number of tractors/k ha)	0.6 (Nigeria 2008) 12 (Botswana 2008)	31 (2010)	17 (2010)

Source : World Bank, China statistical yearbook

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# SMALLEST AND STAGNANT CROPS PRODUCTION PER CAPITA

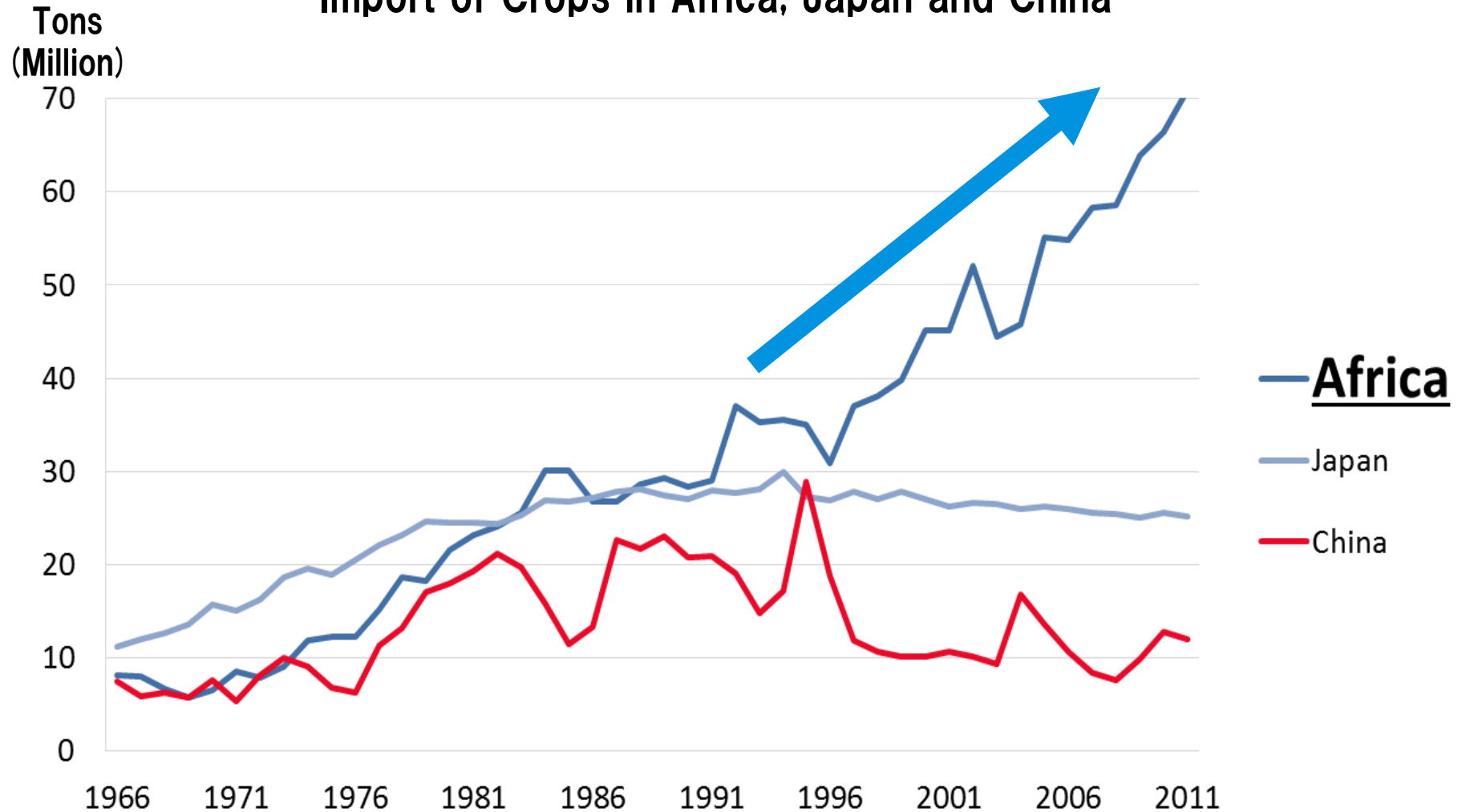


Source: FAO

# SURGE IN IMPORT OF CROPS, TENFOLD IN 50 YEARS



## Import of Crops in Africa, Japan and China

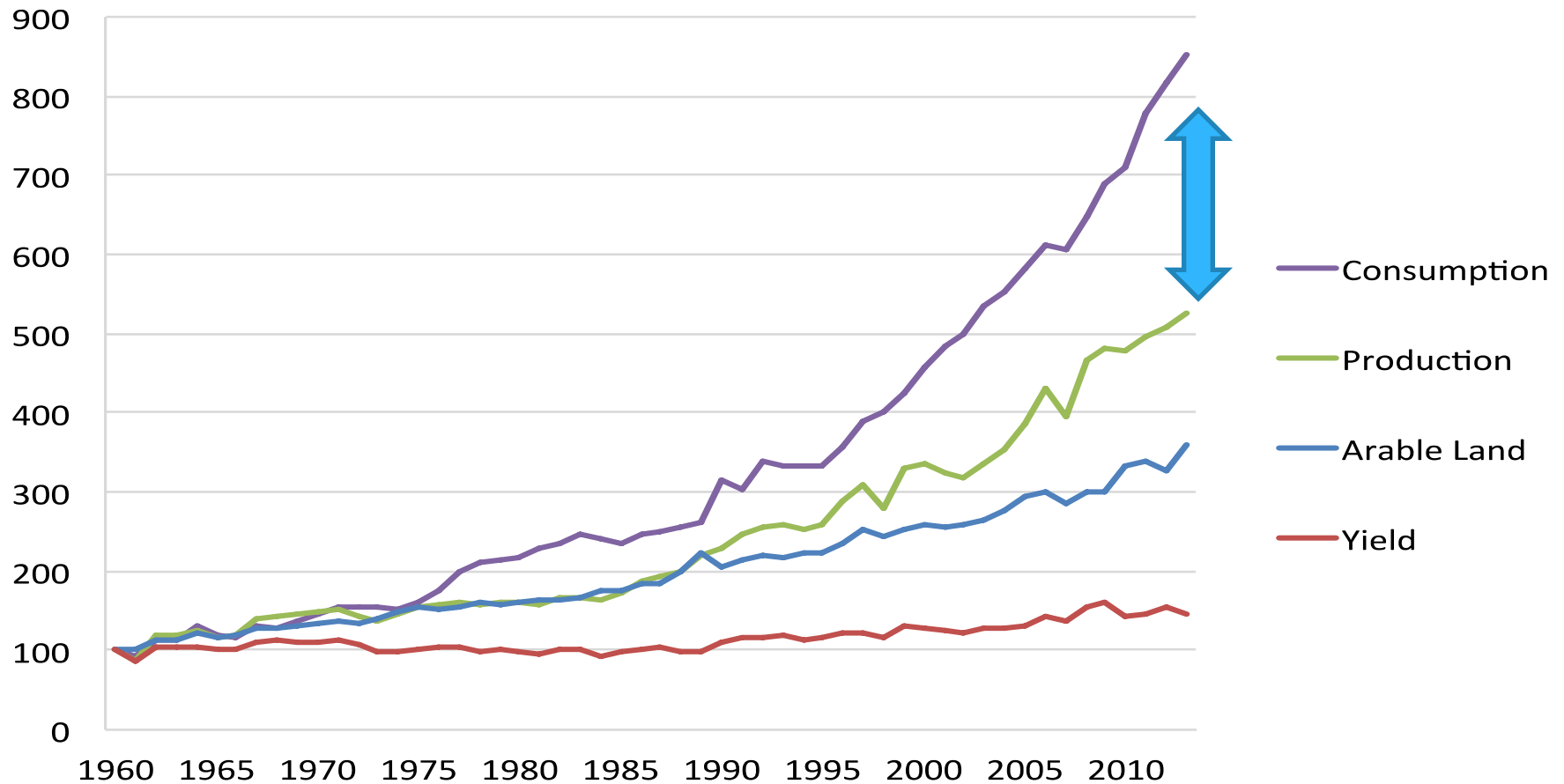


Source: FAO

# PRODUCTION GROWTH LAGGING FAR BEHIND CONSUMPTION EXPANSION ① Rice



## Index of Growth of Consumption, Production, Arable Land and Yield RICE (1960y=100)



Source: United States Department of Agriculture

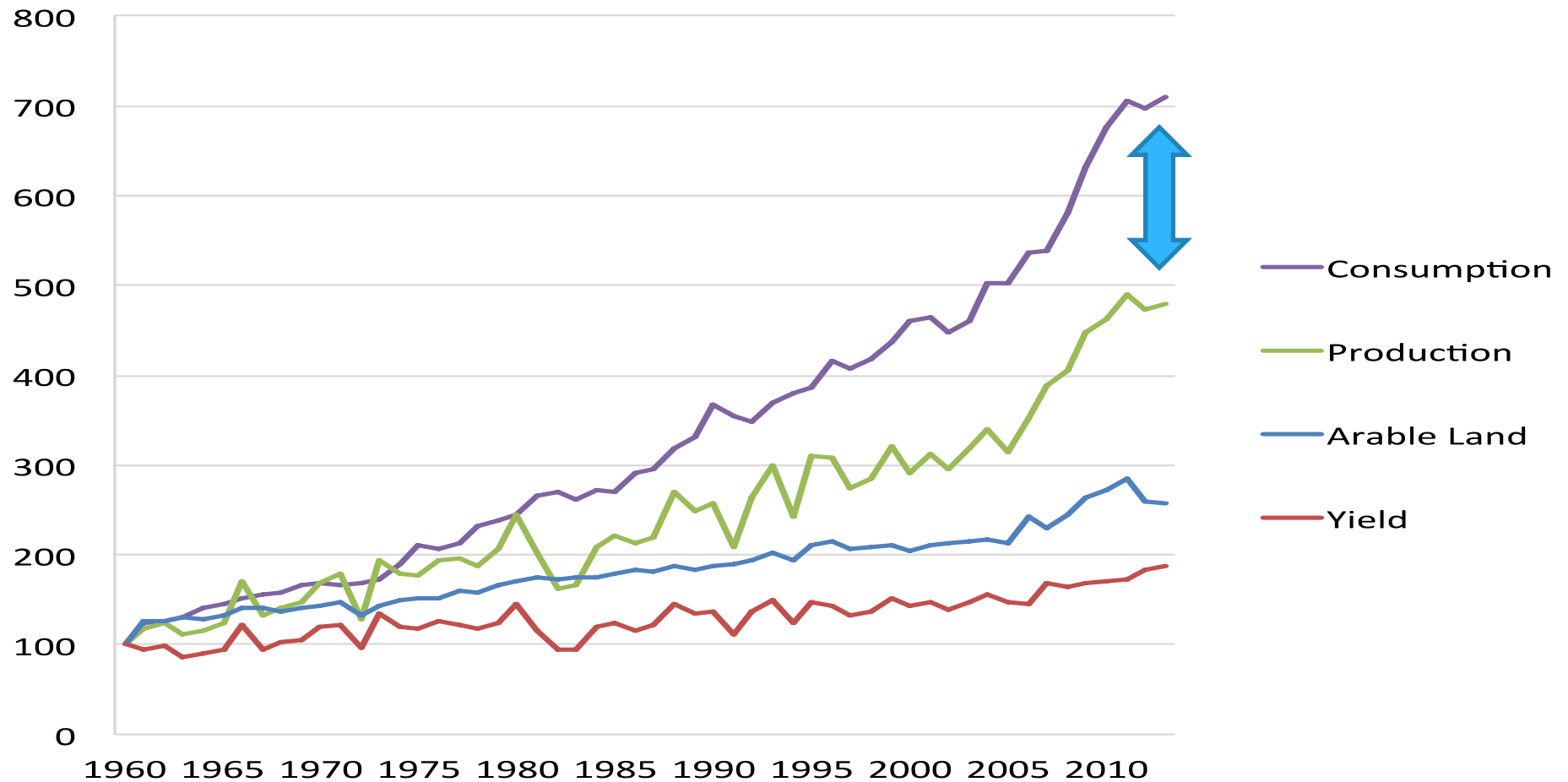
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# PRODUCTION GROWTH LAGGING FAR BEHIND CONSUMPTION EXPANSION ② MAIZE



## Index of Growth of Consumption, Production, Arable Land and Yield MAIZE (1960y=100)



Source: United States Department of Agriculture

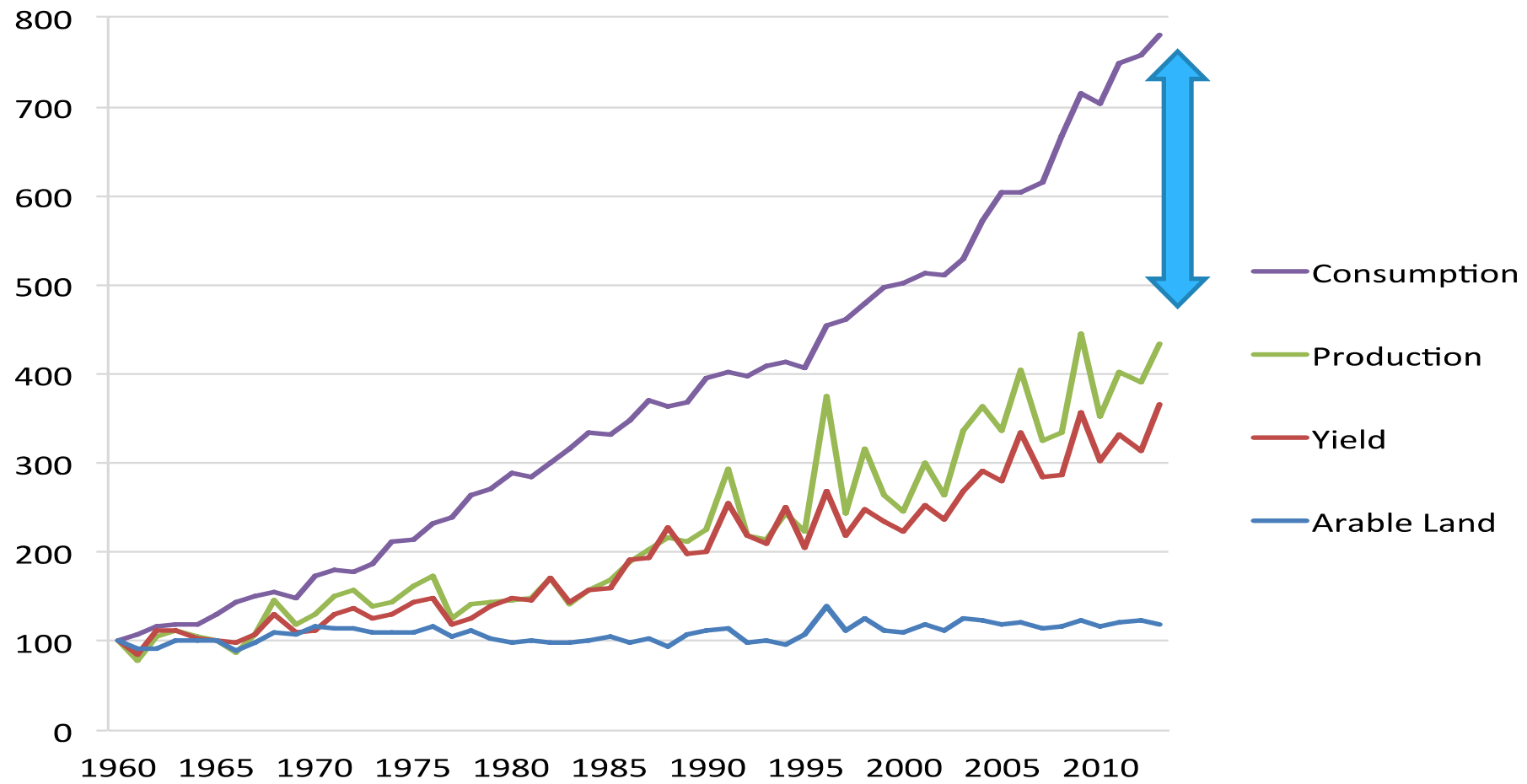
Asia Africa Investment and Consulting Pte. LTD.

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# PRODUCTION GROWTH LAGGING FAR BEHIND CONSUMPTION EXPANSION ③ WHEAT



## Index of Growth of Consumption, Production, Arable Land and Yield WHEAT (1960y=100)

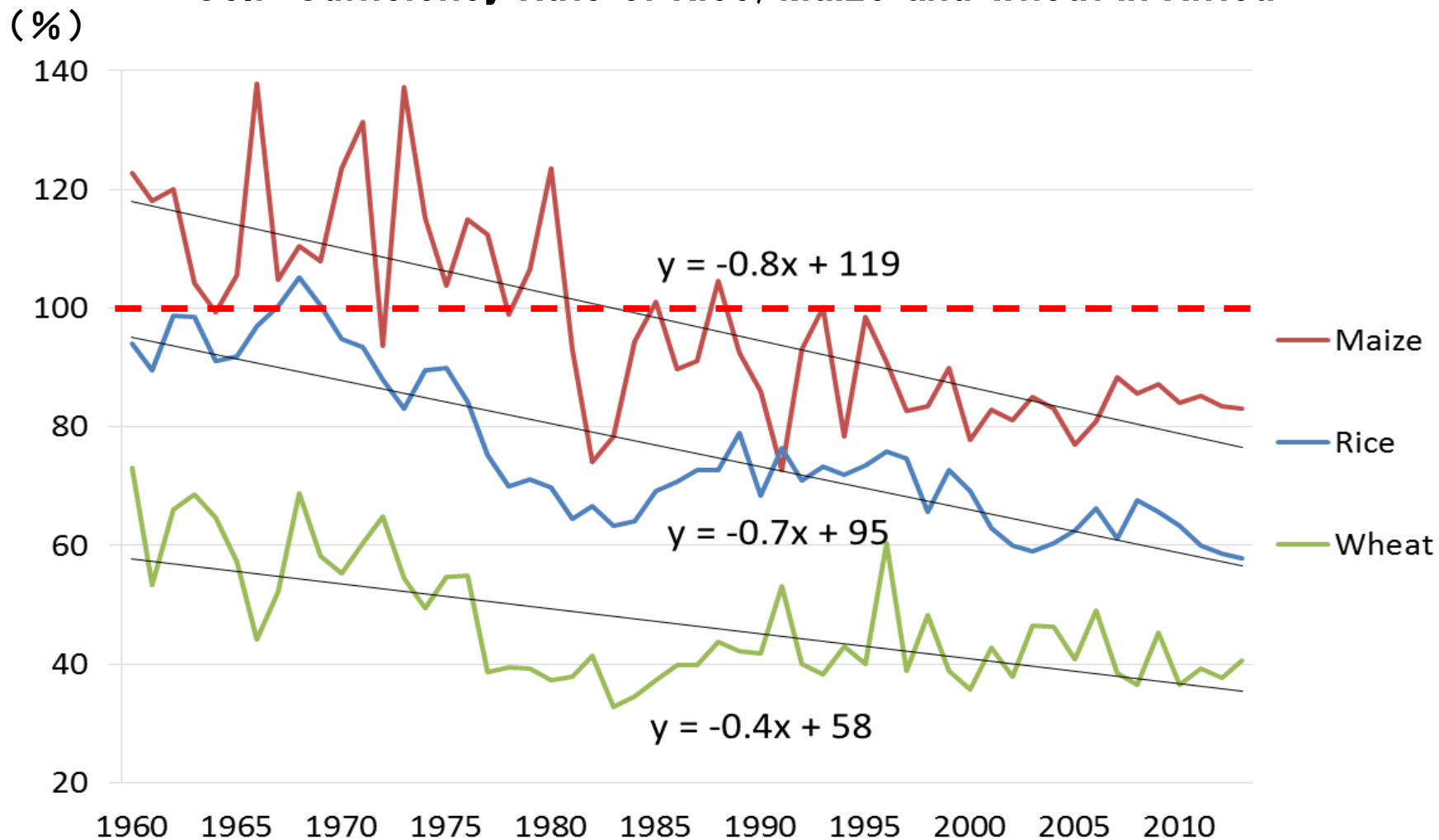


Source: United States Department of Agriculture

# DECLINING SELF-SUFFICIENCY RATE OF MAJOR CROPS



## Self-Sufficiency Rate of Rice, Maize and Wheat in Africa



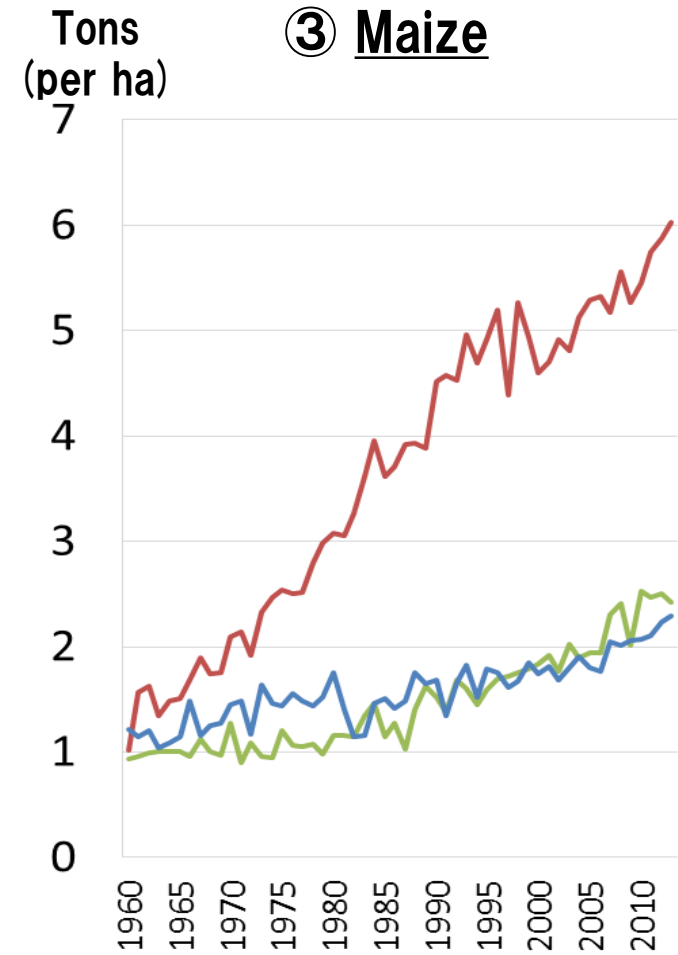
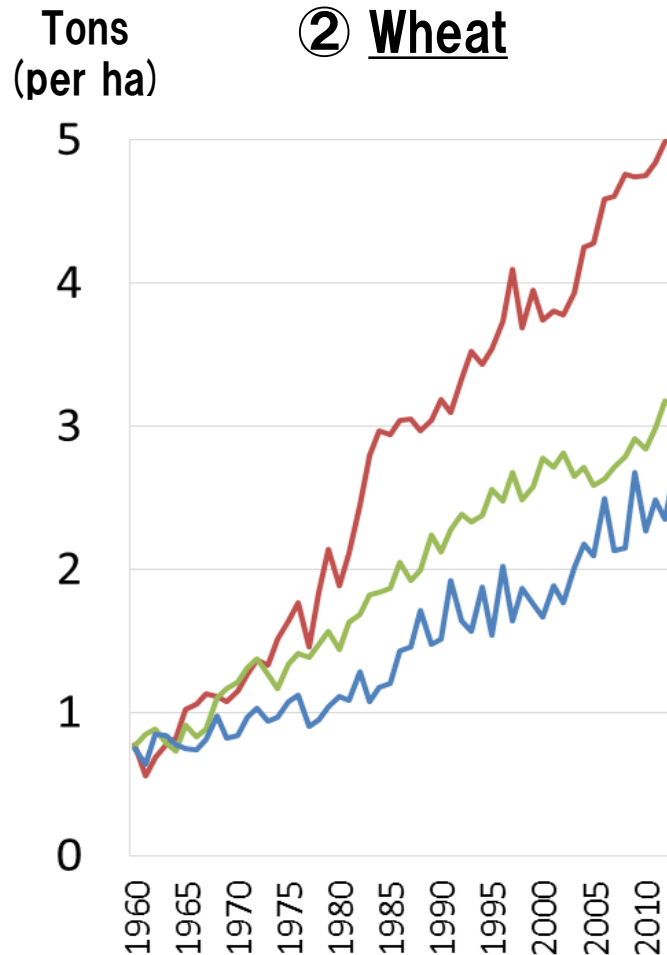
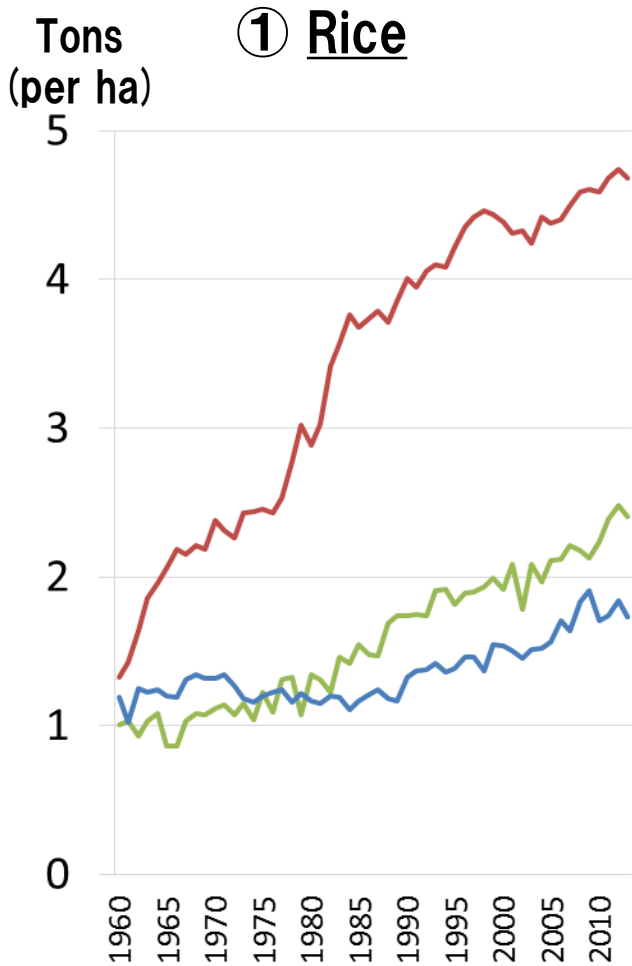
Source: FAO



# SMALLEST YIELD OF CROPS AMONG CHINA AND INDIA



## Yield of Major Crops in China, India and Africa



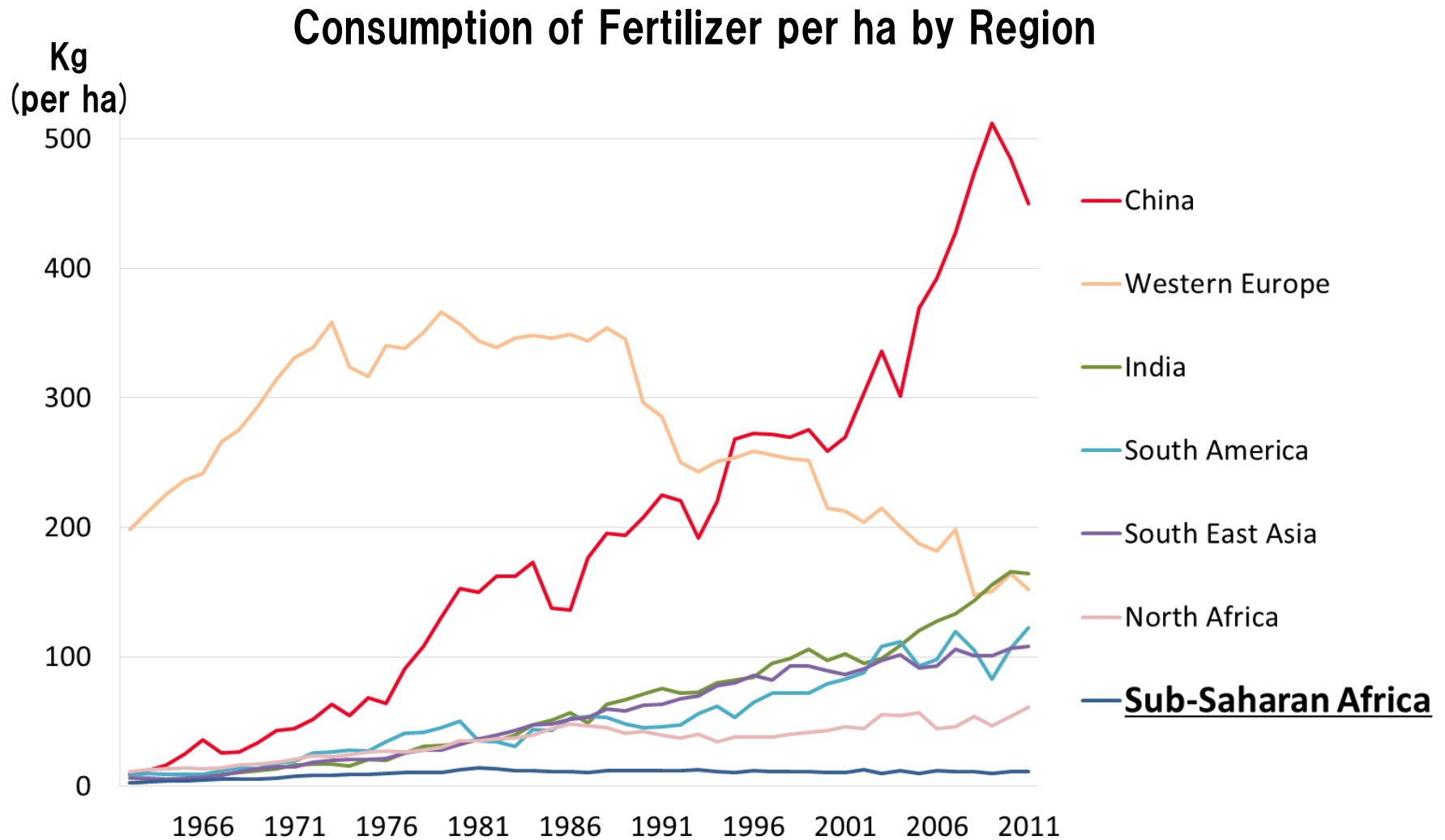
— China

— India

— Africa

Source: FAO

# SMALLEST FERTILIZER CONSUMPTION IN THE WORLD



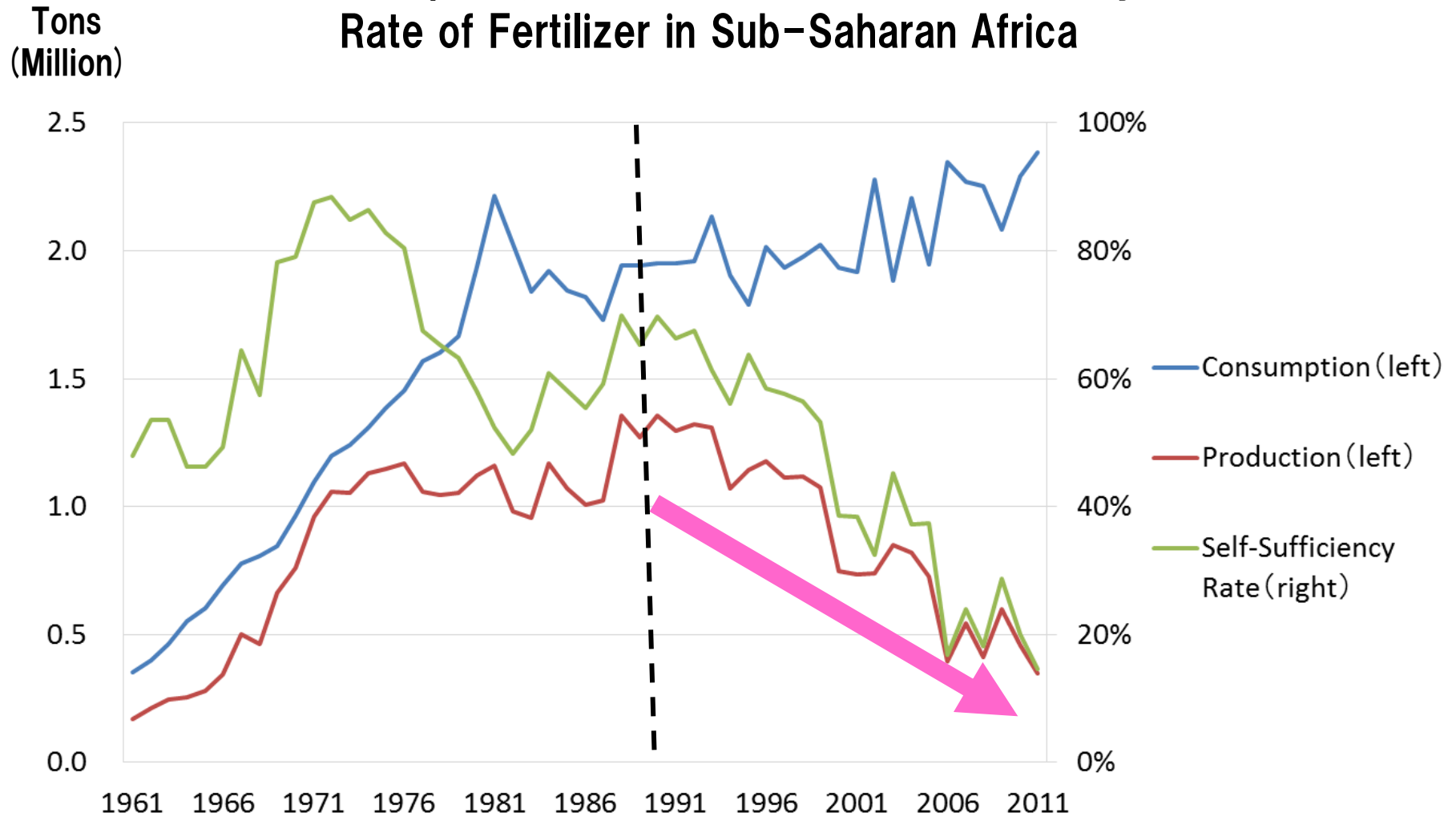
"Fertilizer" consists of nitrogen, phosphate and potash fertilizer

Source: FAO

# FERTILIZER PRODUCTION HALVED IN SUB-SAHARAN AFRICA FROM 90'S



## Consumption, Production and Self-Sufficiency Rate of Fertilizer in Sub-Saharan Africa



"Fertilizer" consists of nitrogen, phosphate and potash fertilizer

Source: FAO

# COMPARISON OF FUNDAMENTALS (BUCK UP)



		Africa			Asia		
		Africa	Northern Africa	Sub-Saharan Africa	China	India	South-East Asia
Population (M)	1963	307	73	234	698	478	233
	2011	1,057	203	854	1,399	1,221	604
	Growth	344%	278%	365%	200%	256%	259%
	CAGR	2.6%	2.1%	2.7%	1.5%	2.0%	2.0%
Crop Consumption (M ton)	1963	56	18	38	143	95	54
	2011	231	83	148	531	278	250
	Growth	413%	461%	391%	371%	292%	463%
	CAGR	3.0%	3.2%	2.9%	2.8%	2.3%	3.2%
Crop Production (M ton)	1963	55	16	39	137	90	55
	2011	165	43	122	521	288	242
	Growth	302%	271%	314%	379%	319%	443%
	CAGR	2.3%	2.1%	2.4%	2.8%	2.4%	3.1%
Crop Self-Sufficiency Rate(%)	1963	98%	88%	103%	96%	95%	101%
	2011	71%	52%	83%	98%	104%	97%
Cultivated Area (1000ha)	1963	172,134	33,625	138,509	104,854	162,050	69,220
	2011	258,303	45,736	212,567	126,314	169,650	110,269
	Growth	150%	136%	153%	120%	105%	159%
	CAGR	0.8%	0.6%	0.9%	0.4%	0.1%	1.0%
Yield of Crops (ton/ha)	1963	0.9	1.2	0.8	1.5	1.0	1.6
	2011	1.5	1.9	1.4	5.7	2.9	4.0
	Growth	165%	159%	175%	378%	297%	258%
	CAGR	1.1%	1.0%	1.2%	2.8%	2.3%	2.0%
Irrigated Area (1000ha)	1963	7,417	5,374	2,043	45,363	26,800	8,444
	2011	13,923	8,517	5,406	66,384	66,750	22,661
	Growth	188%	158%	265%	146%	249%	268%
	CAGR	1.3%	1.0%	2.0%	0.8%	1.9%	2.1%
Fertilizer Consumption (kg/ha)	1963	5.1	12.4	3.3	11.9	3.4	6.5
	2011	20.0	61.0	11.2	450.0	164.1	107.7
	Growth	392%	491%	337%	3784%	4888%	1652%
	CAGR	2.9%	3.4%	2.6%	7.9%	8.4%	6.0%
Tractors in Use (number of tractors/1000ha)	1993	N/A	12.5	0.6	5.6	7.0	N/A
	2007	N/A	14.6	0.8	31.0	16.7	N/A
	Growth	N/A	117%	131%	552%	237%	N/A

※消費量 = 生産量 + 輸入量 - 輸出量

※機械率は、サブサハラアフリカはボツワナ、ナイジェリア、スーダン（分裂前）、マリ、北アフリカはエジプト、アルジェリア、チュニジアの合計から算出した。

※中国の機械化率のデータは中国統計年鑑による。中国、インドの機械化率は2007年ではなく2010年のデータ

# SELF-SUFFICIENCY RATE OF FOOD IN AFRICA (BUCK UP)



		Northern Africa	Western Arica	Eastern Africa	Middle Africa	South Africa	Africa
	Population (Million)	205	297	315	59	57	933
	Total kcal/day	3,098	2,669	2,103	2,227	2,914	2,560
Wheat	Kcal/day	1,106	144	188	185	471	393
	Percentage	36%	5%	6%	6%	15%	13%
	Consumption	35,187	5,871	9,388	1,458	3,436	55,339
	Production	20,248	64	3,768	16	1,978	26,047
	Self-Sufficiency Rate	58%	1%	40%	1%	58%	47%
Rice	Kcal/day	170	337	143	150	136	211
	Percentage	5%	11%	5%	5%	4%	7%
	Consumption	3,905	11,784	5,724	911	795	23,119
	Production	3,731	6,858	4,473	172	2	15,235
	Self-Sufficiency Rate	96%	58%	78%	19%	0%	66%
Maize	Kcal/day	294	243	465	255	866	368
	Percentage	9%	8%	15%	8%	28%	12%
	Consumption	18,169	15,324	20,572	2,615	10,386	67,067
	Production	7,960	14,830	19,999	2,674	12,236	57,702
	Self-Sufficiency Rate	44%	97%	97%	102%	118%	86%
Sorghum	Kcal/day	139	244	97	144	24	151
	Percentage	4%	8%	3%	5%	1%	5%
	Consumption	4,577	12,801	5,925	1,265	378	24,947
	Production	4,985	10,189	5,214	1,251	329	21,690
	Self-Sufficiency Rate	109%	80%	88%	99%	87%	87%
Millet	Kcal/day	28	267	33	69	7	107
	Percentage	1%	9%	1%	2%	0%	3%
	Consumption	697	13,979	1,861	619	61	17,218
	Production	642	11,516	1,861	657	46	14,721
	Self-Sufficiency Rate	92%	82%	100%	106%	75%	85%
Starchy Roots	Kcal/day	76	499	325	485	72	320
	Percentage	2%	16%	10%	16%	2%	10%
	Consumption	9,391	116,810	51,058	22,604	2,631	202,495
	Production	9,335	112,992	51,691	23,568	2,450	200,056
	Self-Sufficiency Rate	99%	97%	101%	104%	93%	99%
Others	Kcal/day	1,285	935	852	939	1,338	1,010
	Percentage	41%	30%	28%	30%	43%	33%

Source: FAO