

# Famine Population Empirical Background Handout

## 3 Scenarios: (Lincoln Star 11/30/94)

"A... business-as-usual scenario points to looming shortages of food," said Massachusetts Institute of Technology Professor Henry Kendall, the Nobel winner, and David Pimentel, Cornell professor of insect ecology and agricultural sciences. Their report was sponsored by the Union of Concerned Scientists.

Under the middle of three U.N. estimates of growth, the population will double to more than 10 billion by 2050.

• **The present course:** Population increases to 10 billion and there is a 50 percent increase in annual grain production by 2050 with world per capita grain production decreasing about 20 percent.

Africa, China and India, with half the world's population by 2050, "will face particularly severe problems."

• **Pessimistic:** Population grows at maximum estimated level to 13 billion by 2050 and per capita food production would fall by 40 percent.

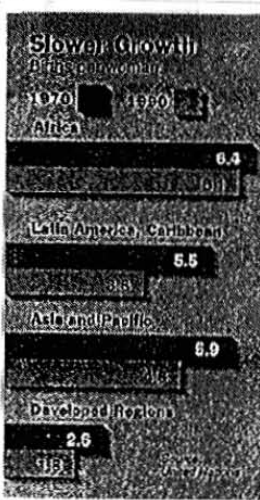
"There is, in this scenario, little hope of providing adequate food for the majority of humanity by the middle or later decades of the period."

• **Optimistic:** Population growth stabilizes more rapidly and is 7.8 billion in 2050. "Then grain production adequate for the population might be achievable. This would require a near doubling of today's production."

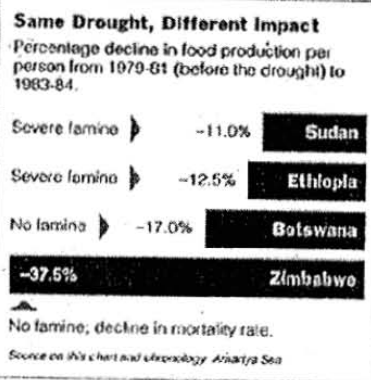
They said it would also require that grain be used largely as food for people with little used for animal feed.

The article appeared in *Ambio*, environment journal of the Royal Swedish Academy of Sciences.

## (from 5/31/92 New York Times)



## (From 1/17/93 New York Times):



## Agriculture and Food — Agricultural Production: Per capita food production index (base year 1999--2001)

Units: Percent of 1999-2001 food production average per capita

	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985
World	101.4	100.7	100.1	100.3	99.6	97.6	96.8	96.0	93.2	92.6	91.4	92.0	90.6	92.0	91.2	89.3	89.5	90.5	90.0

### Source

Food and Agriculture Organization of the United Nations (FAO). 2004. *FAOSTAT on-line statistical service*. Available on-line at <http://apps.fao.org>. FAO.

From <http://earthtrends.wri.org>

## Agricultural Production

Sources: Food and Agriculture Organization of the United Nations (FAO)

EarthTrends Data Tables:  
Agriculture  
and  
Food



Agricultural production index (1989-1991 = 100)	Cereals				Pulses Production		Roots and Tubers Production		Meat Production (metric tons) 2001		
	Production		Yield		Total (000 metric tons) 2002	Percent Change Since 1992	Total (000 metric tons) 2002	Percent Change Since 1992			
	Total (000 metric tons) 2002	Per Capita 2002	kg per hectare 2002	Percent Change Since 1992							
World	127	108	2,029,386	2.8	3,083	10.8	55,165	8.8	634,729	13.6	236,991,142
ASIA (EXCL. MIDDLE EAST)	...	...	922,018	6.0	...	...	23,140	23.8	285,587	20.8	89,312,093
EUROPE	88	87	434,433	10.1	3,529	23.1	8,330	(34.3)	127,764	(15.2)	49,796,566
MIDDLE EAST & N. AFRICA	...	...	91,439	8.3	...	...	3,396	(8.1)	16,557	22.6	8,144,354
SUB-SAHARAN AFRICA	135	98	88,156	34.4	962	7.9	8,296	45.2	169,110	33.4	8,196,212
NORTH AMERICA	120	106	334,184	(17.0)	4,833	3.3	3,993	78.6	26,227	11.8	41,916,827
Canada	116	102	35,440	(28.6)	2,285	(7.1)	2,302	132.2	4,646	28.8	4,174,940
United States	121	107	298,745	(15.4)	5,570	3.9	1,691	35.9	21,581	8.8	37,741,100
C. AMERICA & CARIBBEAN	...	...	33,427	2.1	2,604	4.9	2,650	75.0	4,861	15.4	6,988,588
SOUTH AMERICA	149	123	104,341	22.2	3,011	24.3	3,853	7.0	48,306	22.6	25,393,700
OCEANIA	115	97	18,648	(27.9)	1,134	(41.0)	1,392	(33.5)	3,469	13.3	5,285,178
DEVELOPED	99	94	840,806	(4.8)	3,591	10.7	14,063	(18.9)	168,439	(9.7)	103,564,712
DEVELOPING	150	123	1,185,842	9.6	2,801	12.5	41,089	24.6	513,453	24.9	131,468,806

a. Data for China includes Taiwan.

b. Data relating to Kashmir-Jammu, whose final status has not yet been determined, are generally included under India and excluded from figures for Pakistan. Data for Sikkim are included under India.

c. Most data for recent years include those from East Timor.