

## Impact of Charcoal Rot and Other Diseases on World Soybean Supply





## Total World Soybean Production Among Years

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Year	Production (billion bushels)
2001	6.45
2002	6.78
2003	7.22
2004	6.84
2005	7.91
2006	8.08
2007	8.69
2008	8.11
2009	7.73

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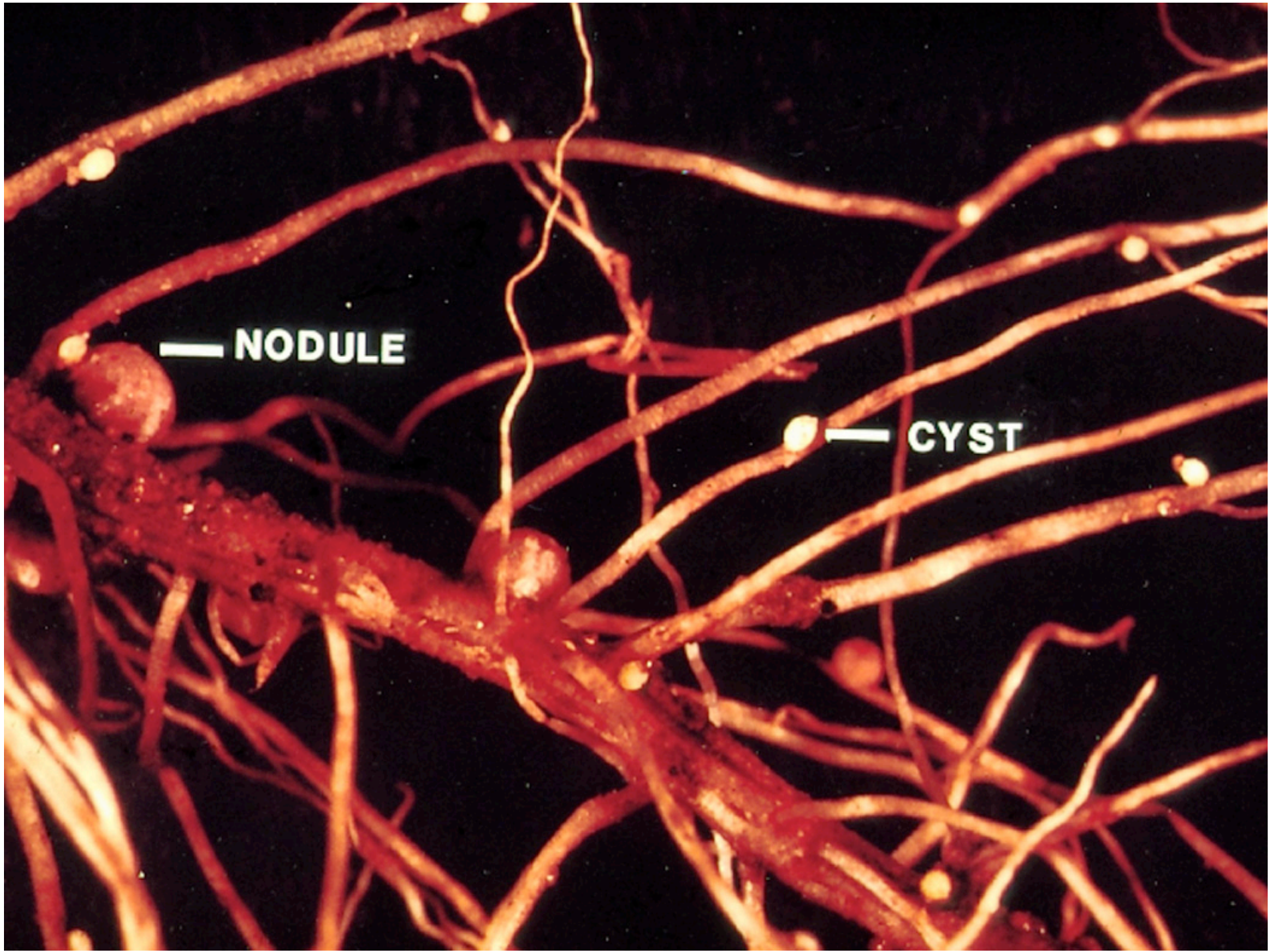
Table 2. World Soybean Production by Country for 2006 and 2009

Countries	Production (billion bushels)	
	2006	2009
United States	3.10	2.96
Brazil	2.10	2.10
Argentina	1.50	1.20
China	0.60	0.57
India	0.26	0.33
Paraguay	0.13	0.14
Canada	0.12	0.12
Other	0.35	0.34
Total	8.08	7.73









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Estimates of Soybean Yield Loss due to Major Diseases in  
the Top Eight Soybean Producing Countries in 1998  
and 2006

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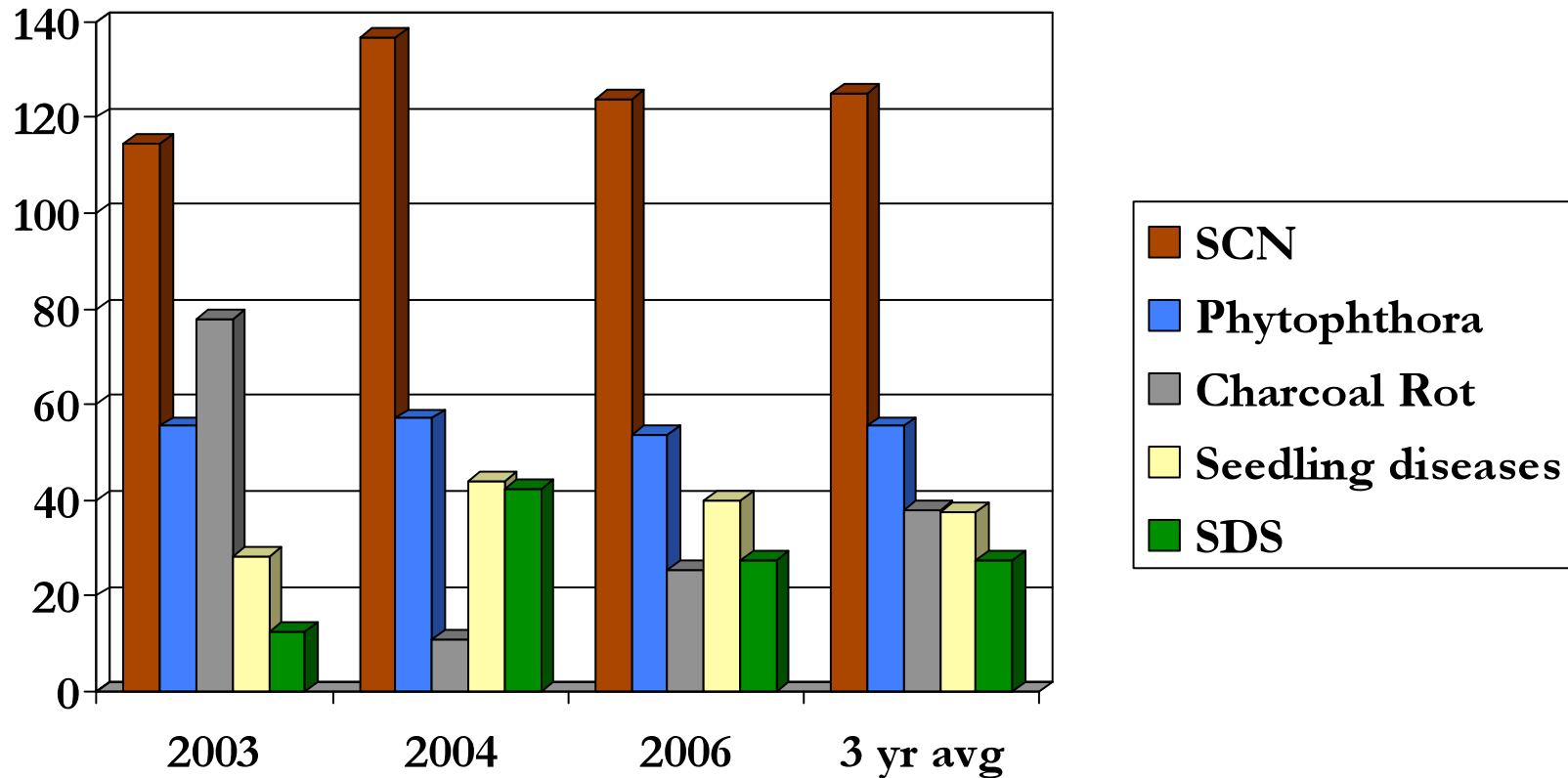
Diseases	Yield Loss (million bushels)	
	1998	2006
Anthracnose	8.9	93.1
Brown spot	94.9	156.2
Charcoal rot	73.9	91.8
Rust	7.3	485.4
SCN	328.9	263.7
Seedling diseases	33.7	123.4

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Wrather, A., G. Shannon, R. Balardin, L. Carregal, R. Escobar, G. Gupta, Z. Ma, W. Morel, D. Ploper, and A. Tenuta. 2010. Diseases effects on soybean yields in the top eight soybean-producing countries in 2006. Online. Plant Health Progress doi:10.1094/PHP-2010-0125-01-RS.



# Soybean Yield Robbers 2003 - 2006



Estimated U.S. yield loss by disease in three years (million bushels)

Data from Koenning & Wrather 2007 with support of the **United Soybean Board**







**Charcoal root rot suppressed soybean yields more in AR, IL, IN, KS, KY, MO, MS, and TN than other states in 1996 to 2007.**

Soybean Yield Loss (million bushels) in the U. S. Due to Charcoal Rot, SCN, Rust and Phytophthora among years.

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Year	Charcoal rot	SCN	Phytophthora	Rust
1998	38.1	279.1	42.2	
1999	40.4	169.3	26.1	
2000	30.2	141.9	39.5	
2001	17.6	144.3	51.1	
2002	31.7	142.9	45.9	
2003	77.8	114.5	55.5	
2004	10.8	136.7	57.1	
2005				0.5
2006	25.6	123.8	53.8	0.9
2007	30.1	93.9	25.1	0.6
2008	22.4	171.9	48.6	0.2

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Estimates of soybean yield losses due to diseases in the U. S. from 1996 to 2008 are available at the following University of Missouri web site.

<http://aes.missouri.edu/delta/research/soyloss.stm>





Project Supported By  
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