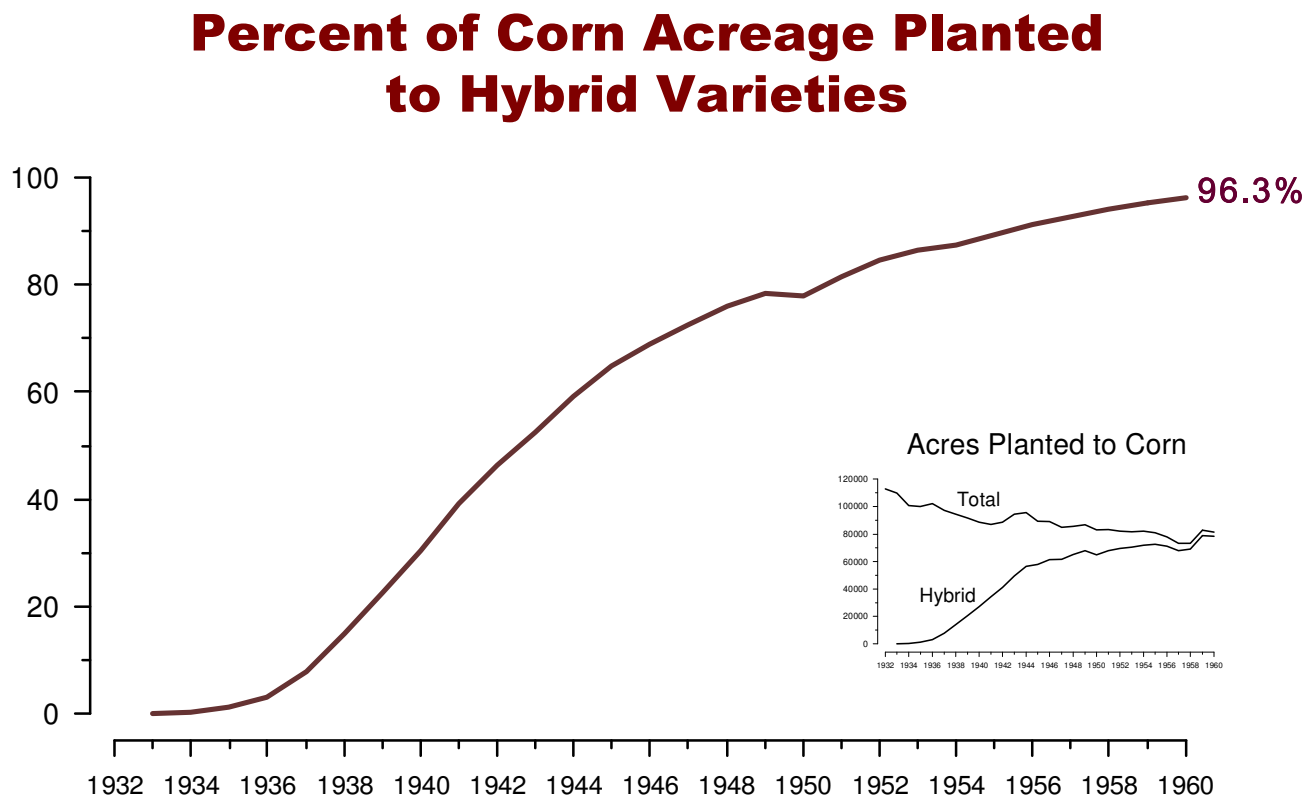

Source: Acreage planted to hybrid seed corn from USDA, *Agricultural Statistics*, 1962, Table 46, p. 41, divided by acreage planted to corn from USDA, National Agricultural Statistics Service, *Historical Track Records*, April 2004, p.19.

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FIGURE 1

Geographic Supply Lags were Rapidly Eliminated

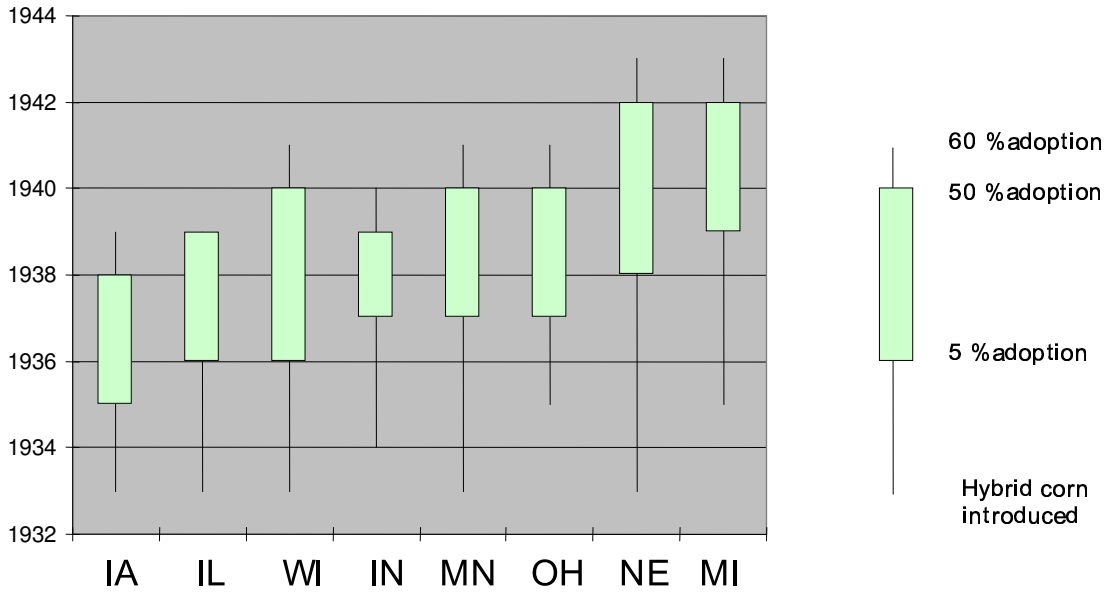

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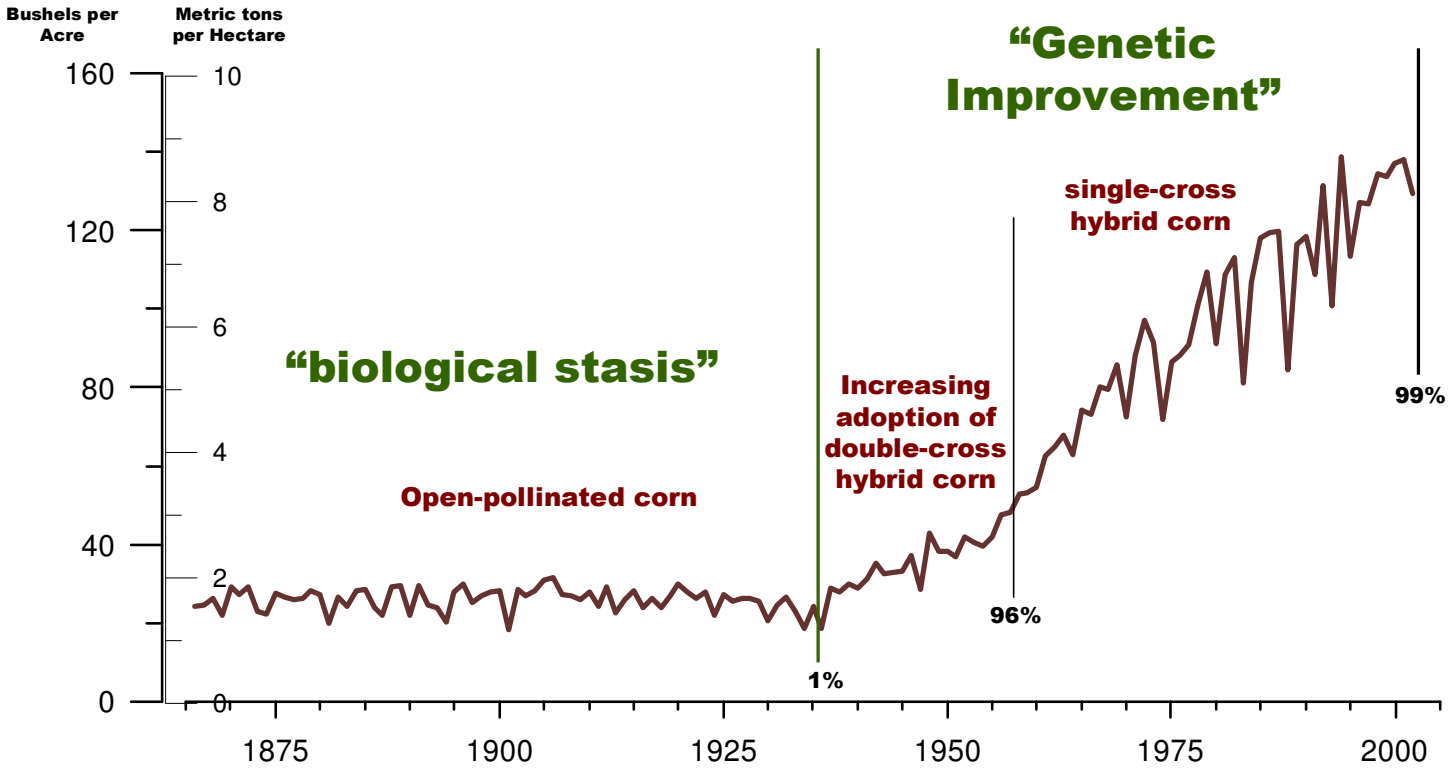
FIGURE 2

U.S. Corn Yields, 1866-2002



Source: Susan B. Carter, et al, editors, *Historical Statistics of the United States*, Cambridge University Press, 2006, Series Da693-694. United States National Agricultural Statistics Service, *Field Crops: Final Estimates, 1997-2002*, Statistical Bulletin Number 982a, March 2004, pp. 7 & 9.

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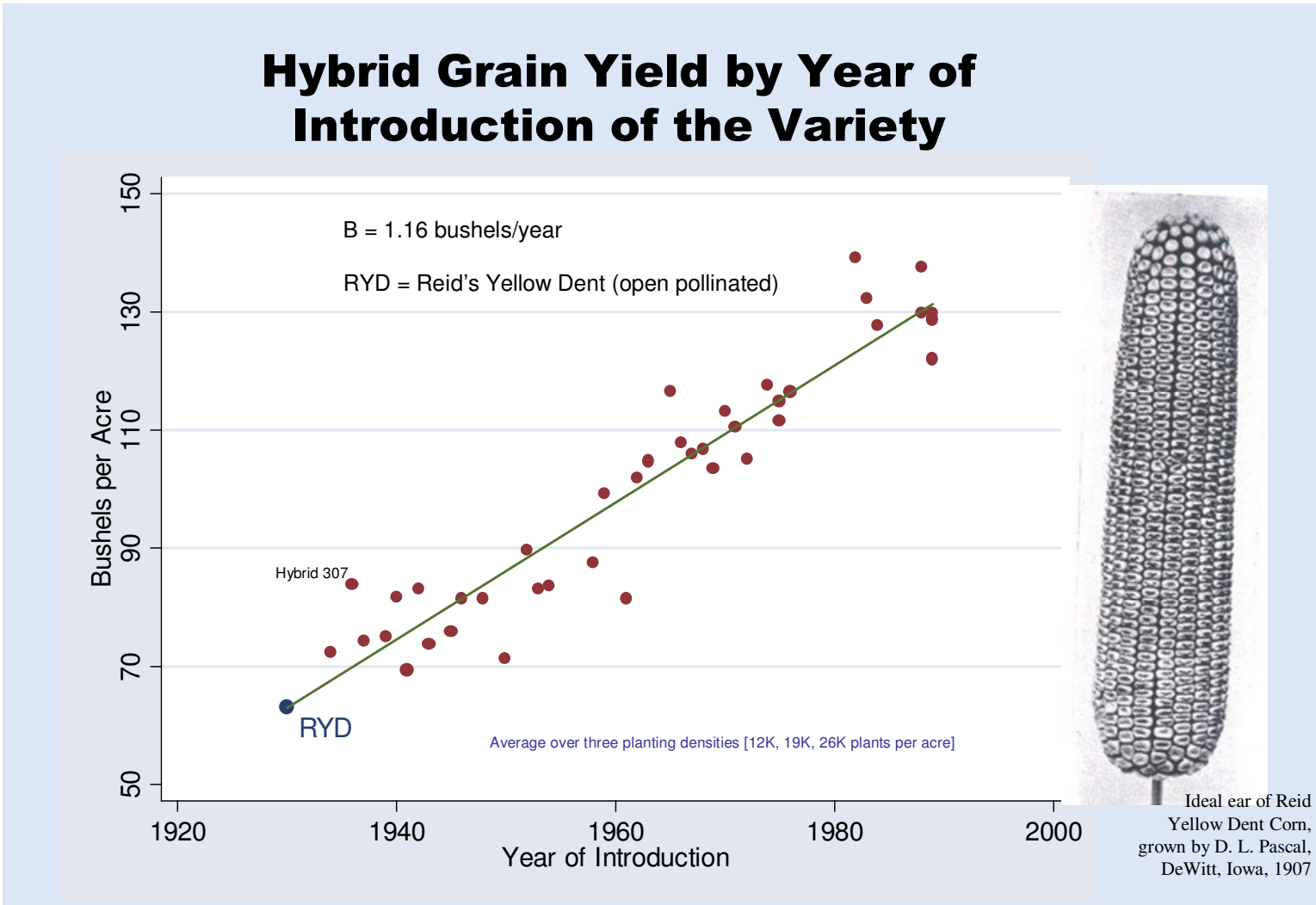
FIGURE 3



Source: Dan N. Duvick, "Genetic Contributions to Advances in Yield of U.S. Maize," *Maydica* (37) 1992: 69-79; Table 3, p. 73.

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FIGURE 4

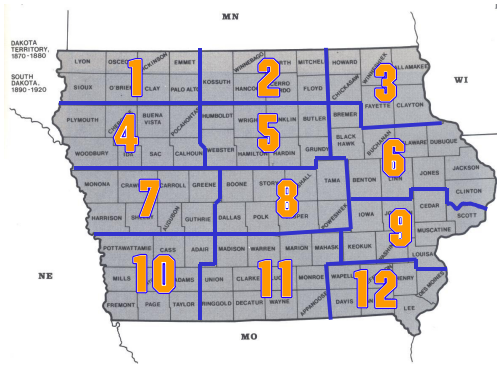
Iowa Corn Yield Tests, 1926-1940

Relative Average Yield for all Hybrid Varieties
All Open- Pollinated Varieties = 100

District		1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
1		117	109	110	109	114	116	115	114	112	111	107	107	115	110	108
2		105	117	120	124	113	*	102	110	101	109	118	109	109	115	122
3		97	103	109	114	111	106	102	107	119	106	126	112	118	114	+
4		116	105	110	110	116	112	107	129	111	121	*	108	114	113	121
5		107	111	108	108	114	113	108	128	108	107	129	114	112	107	127
6		105	110	103	103	105	109	106	116	106	103	117	108	117	116	115
7		105	103	114	109	113	107	112	109	*	122	*	150	131	120	121
10		111	102	111	108	102	105	102				140	133	120	141	132
8		104	98	115	109	124	108	110	114	149	113	127	109	112	112	116
11		103	114	108	112	111	106	111				154	114	134	115	#
9		105	102	114	114	106	107	106	105	115	105	149	114	106	110	122
12		110	107	104	106	103	102	100				141	118	115	108	118

	*	Crop lost -- drought
	+	Poor crop -- "not calculated"
	#	Crop abandoned -- wire worms

Note: For 1933-1935 districts 10, 11, and 12 were combined with districts 7, 8, and 9 respectively.



Source: Marcus S. Zuber and Joe L. Robinson, "The 1940 Iowa Corn Yield Test," *[Iowa] Agricultural Experiment Station Bulletin* P19 NS, February 1941:589.

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FIGURE 5

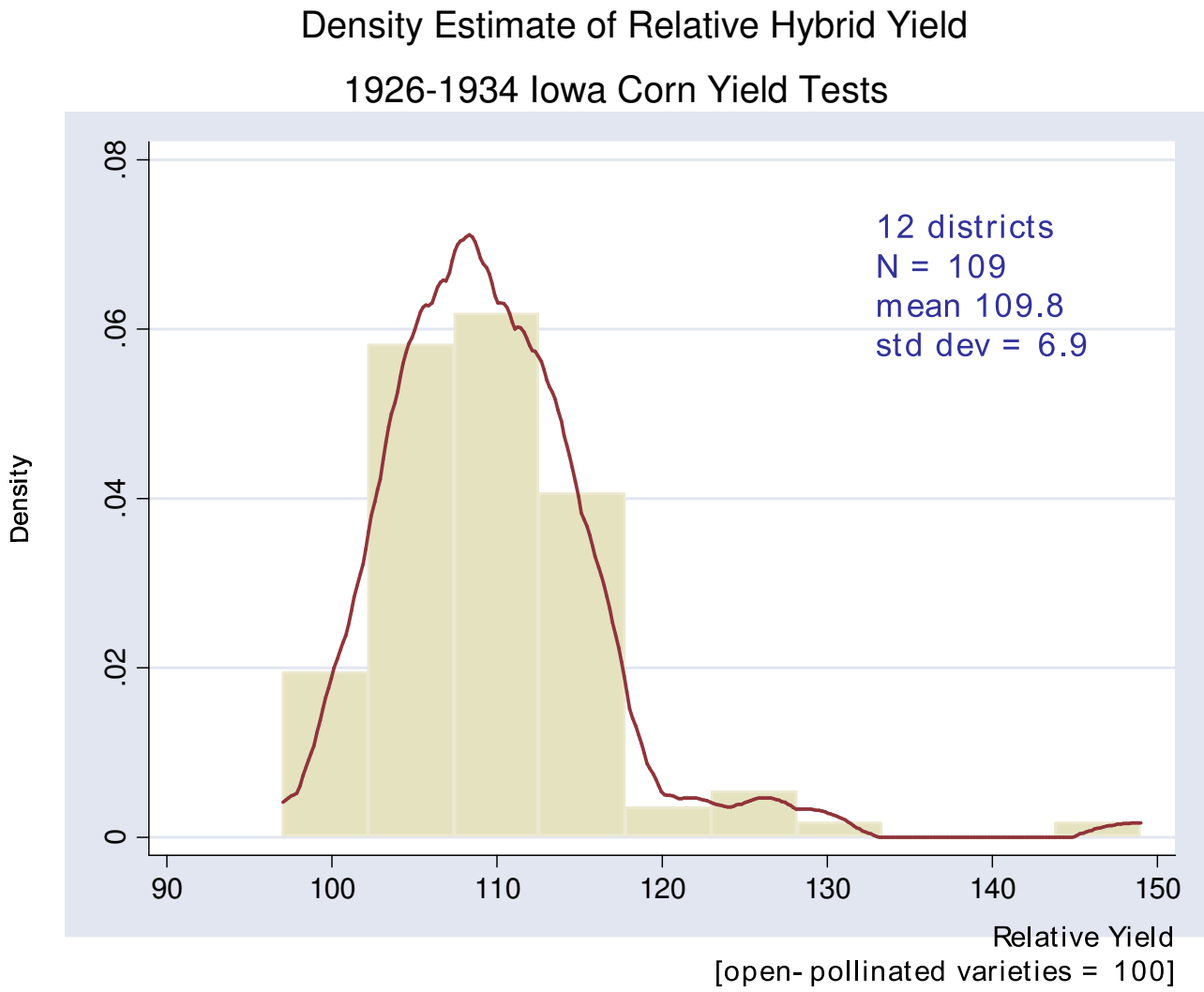

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FIGURE 6

Cost of Corn Seed, Average 1935-39

Hybrid seed in 1924 sold for $56 per bushel.

Edward May, President of the May Seed Company, "The Development of Hybrid Corn in Iowa," I. E. Melhus, editor, *Plant Research in the Tropics*, [Iowa] Agricultural Experiment Station, December 1949: 514.

Hybrid Seed	$8.77 per bushel
Open-Pollinated	$2.35 per bushel
Field corn	$0.656 per bushel

Difference $6.42 ~ Value of 10 bushels of field corn

Seeding Rate [acres/bushel]	Required Gain to warrant adoption [bushels]	
>1	10	drilled corn 19th century, *Rural Carolinian* (1870)
1.3-1.7	7.7-5.9	3'4" spaced hills 4-3 kernels to a hill; ICYT 1953
1.5-2.2	4.5-6.5	12-13K plants per acre, 4-3 kernels to a hill typical of southern Minnesota 1930s Cardwell (1982)
2.0	5	typical of central Iowa mid-1930s Duvick (1992)
2.9	3.4	current rule of thumb: (28K kernels per acre; 80K kernels per bushel)
7	1.4	Ryan and Gross, Iowa (1950) {no cite}

Sources: "Field Seeds Retail Prices," Agricultural Marketing Service, Crop Reporting Board, Agricultural Prices, June 1957.
Susan Carter *et al*, editors, *Historical Statistics of the United States*, Cambridge University Press, 2006, Series Da697.
"Facts and Figures for Farmers," Rural Carolinian 1(January 1870), p. 211.
Joe L. Robinson and Charles D. Hutchcroft, "The 1953 Iowa Corn Yield Test," *[Iowa] Agricultural Experiment Station Bulletin* P116, February 1954, pp. 7-8.
Donald N. Duvick, "Genetic Contributions to Advances in Yield of U.S. Maize," *Maydica* 37 (1992): p. 71
Bryce Ryan and Neal Gross, "Acceptance and Diffusion of Hybrid Corn Seed in Two Iowa Communities," *[Iowa] Agricultural Experiment Station Research Bulletin* 372, January 1950, p. 668.

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FIGURE 7

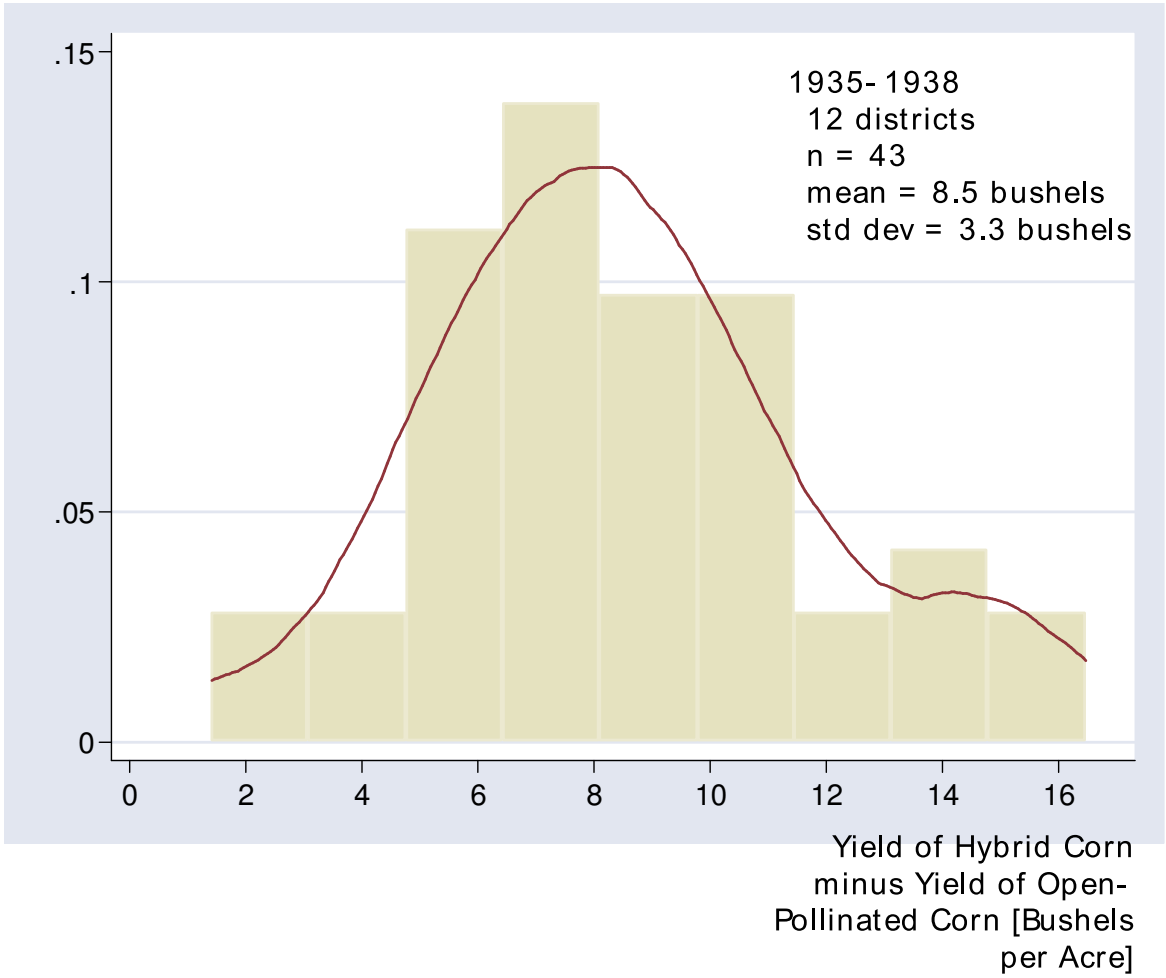

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FIGURE 8

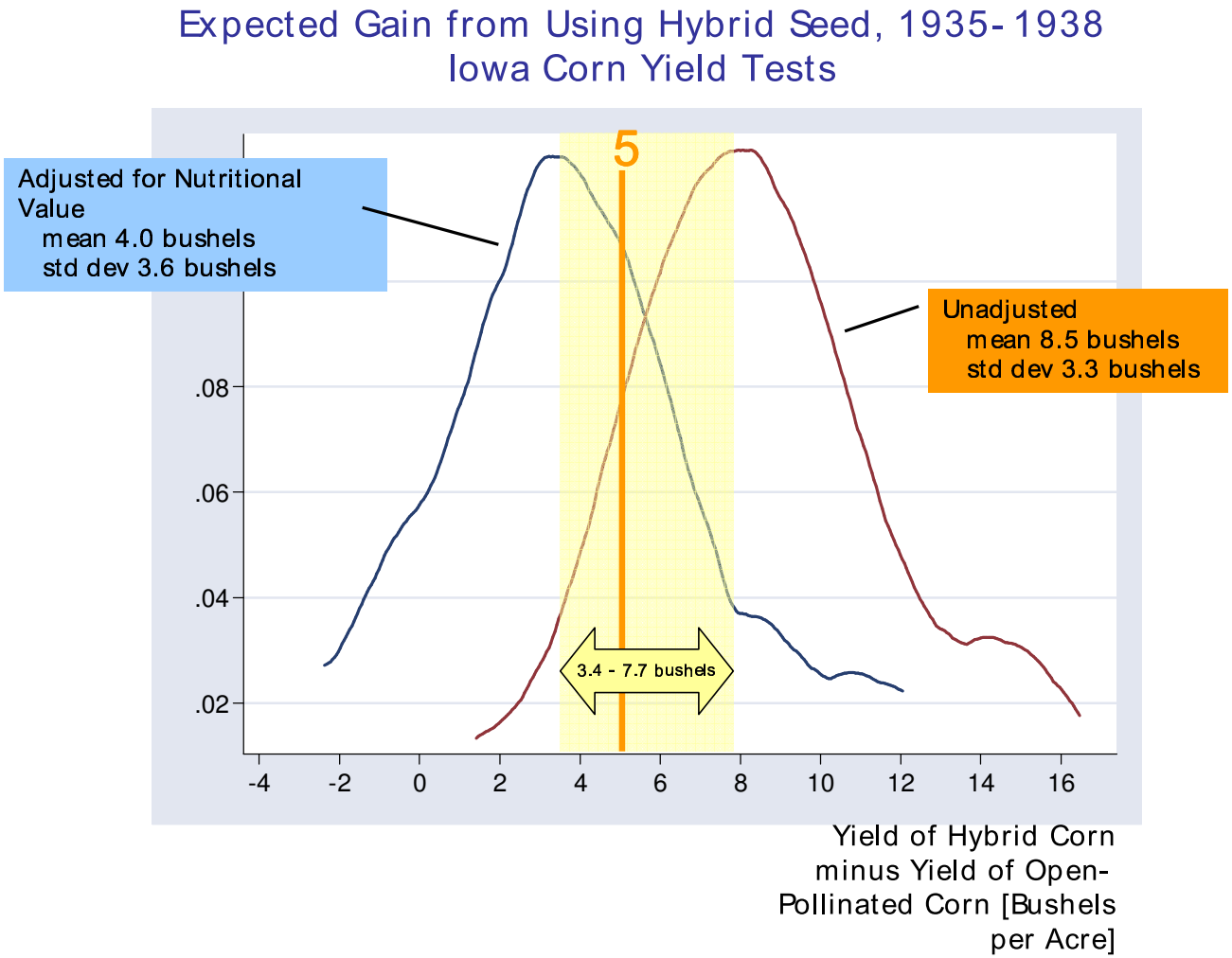

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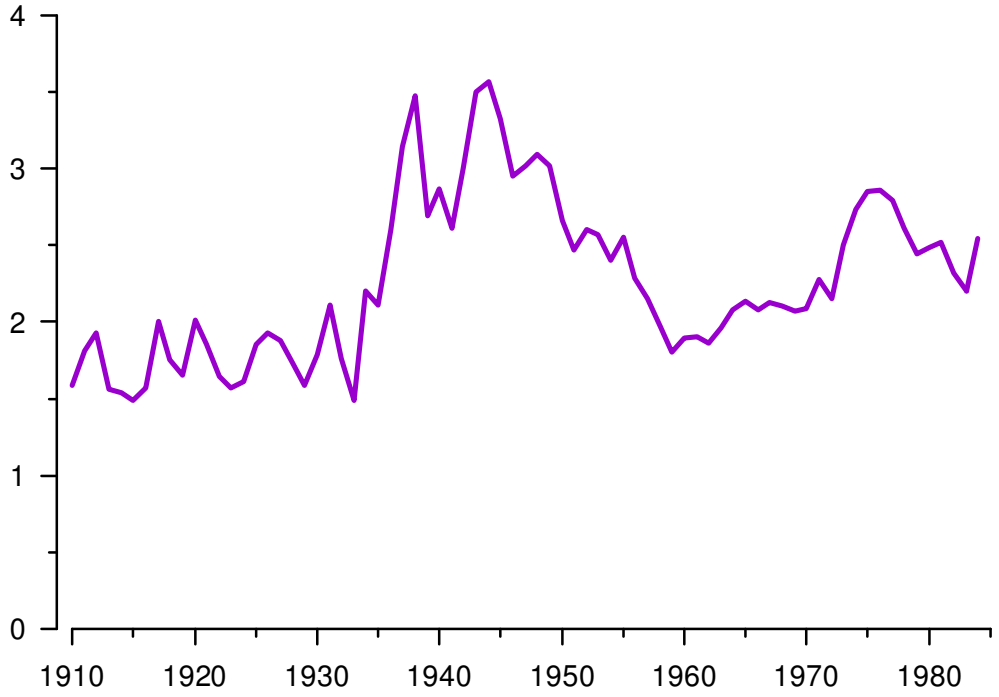
FIGURE 9

Seed Costs as a Percentage of All Production Costs

U.S. Agriculture, 1910-1984



Gary Lucier, Agnes Chesley, and Mary Ahearn, "Farm Income Data: A Historical Perspective," *USDA Statistical Bulletin* No 740: 22-25.

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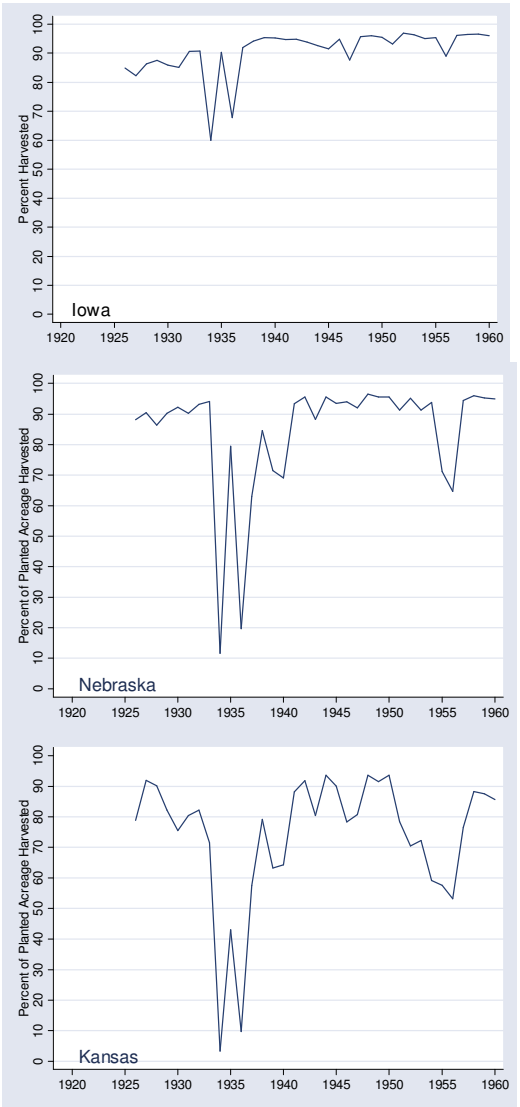
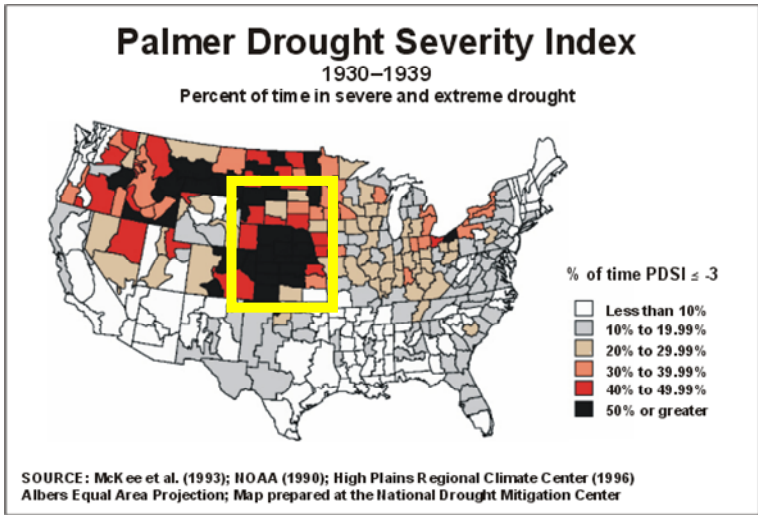
FIGURE 10





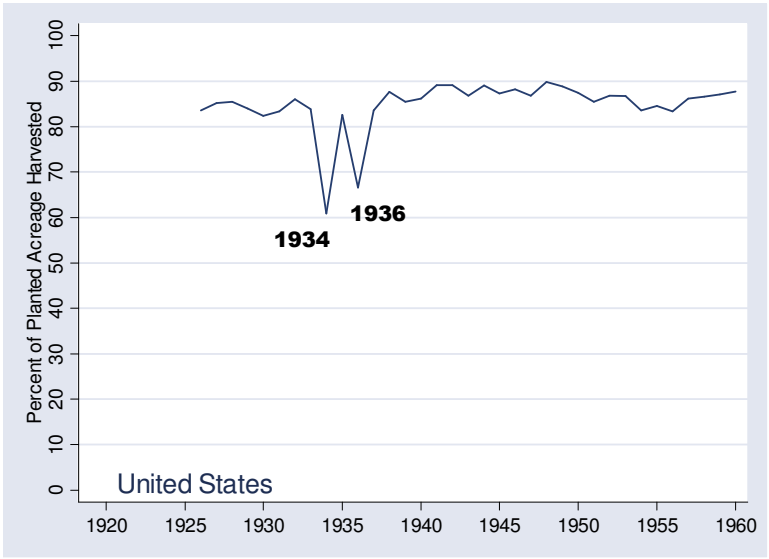


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FIGURE 11

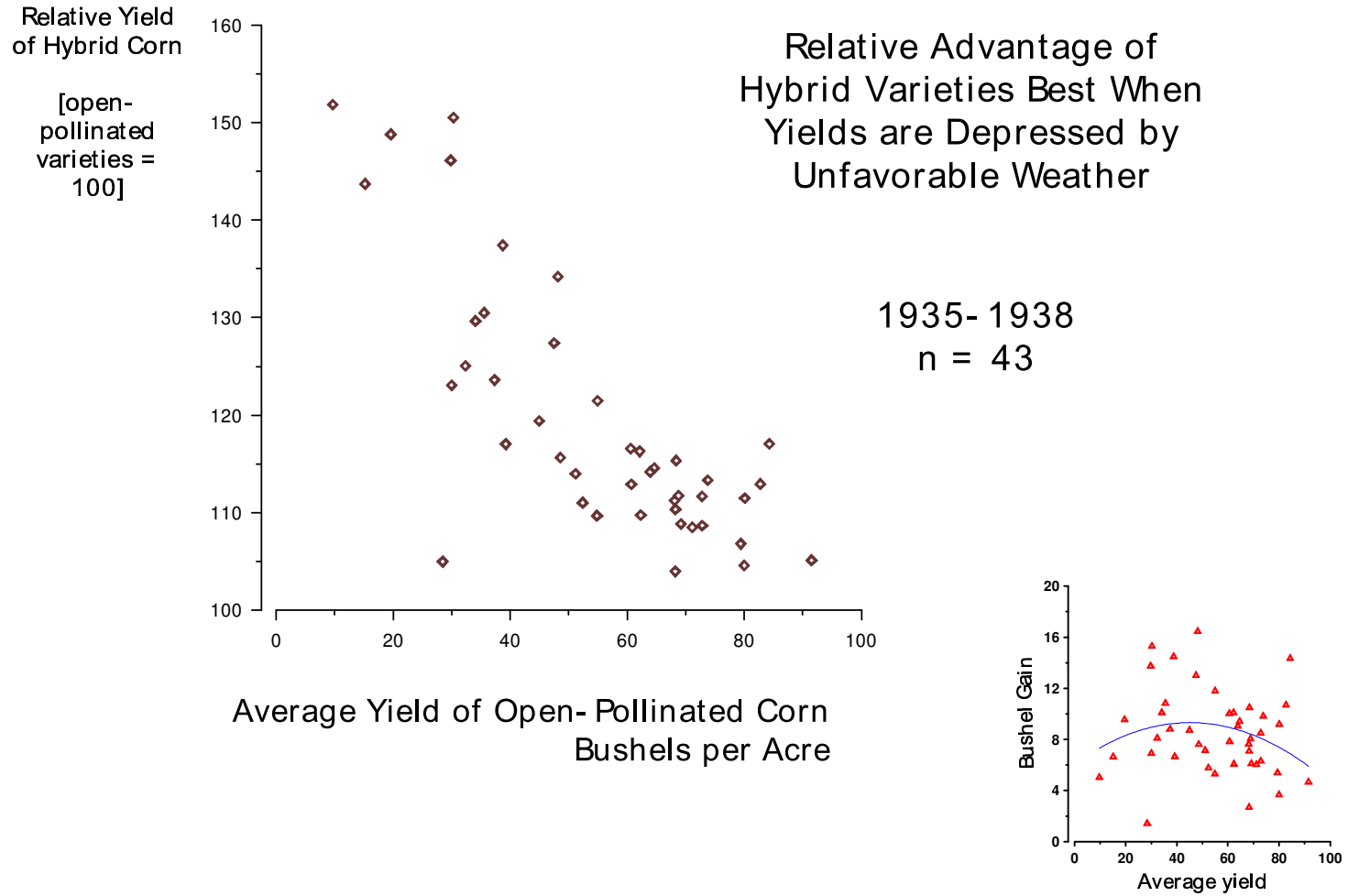

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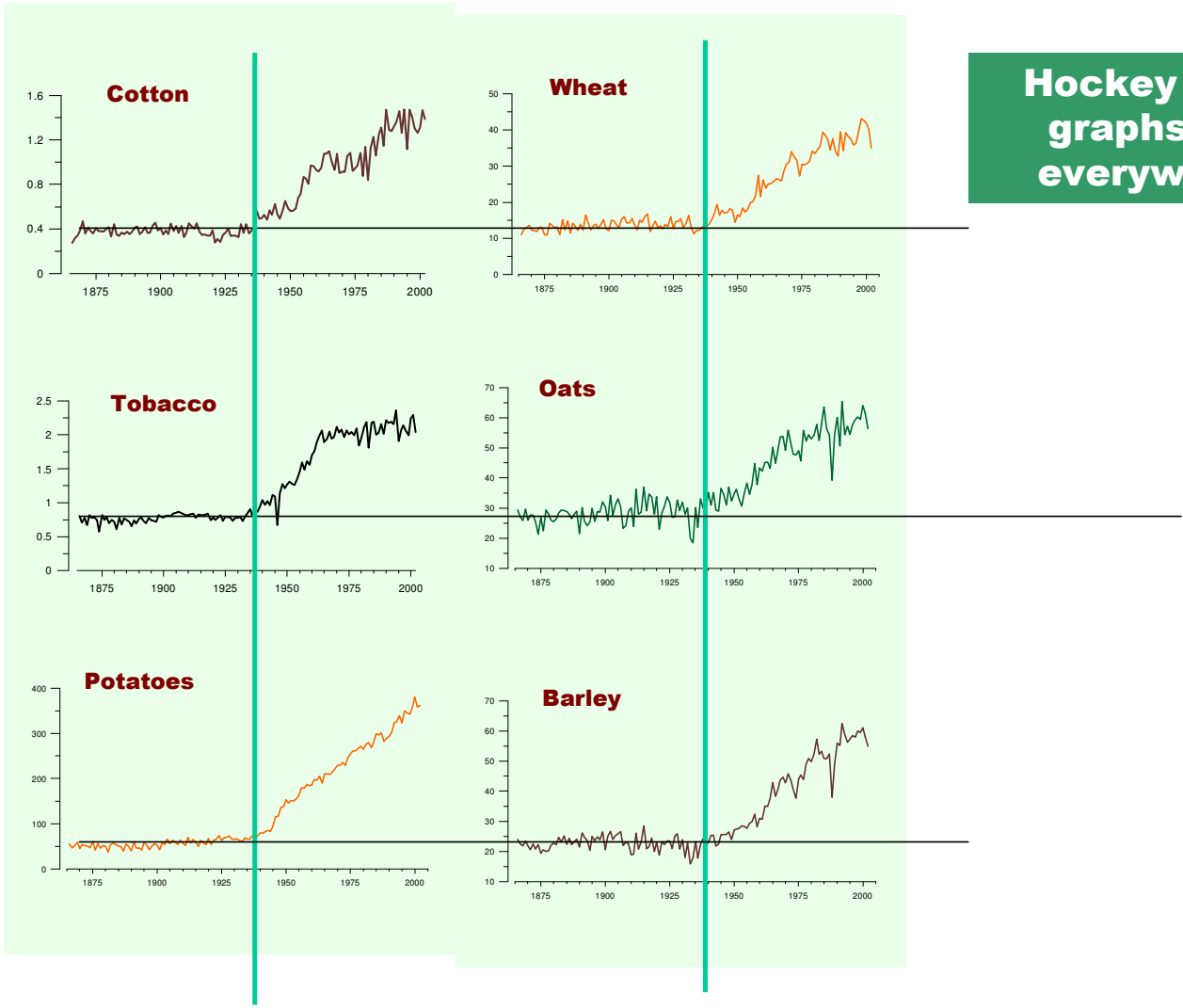
FIGURE 12



Hockey stick graphs are everywhere

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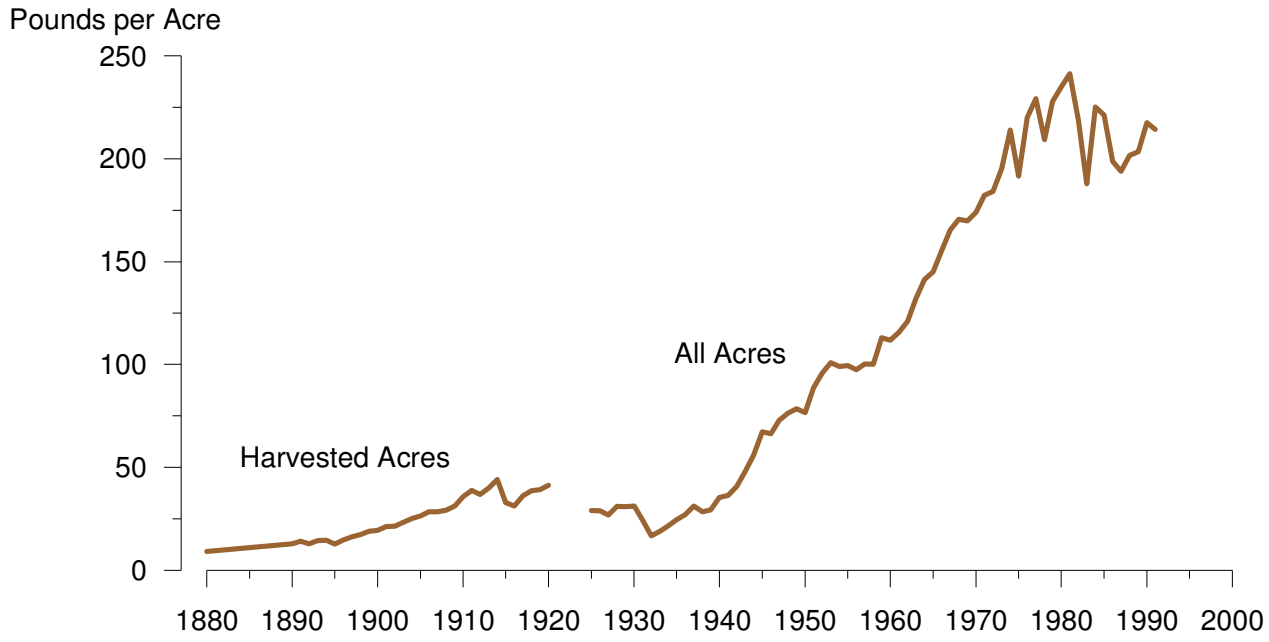
FIGURE 13

Commercial Fertilizer Use per Acre of Cropland



Source: Susan Carter *et al*, editors, *Historical Statistics of the United States*, Cambridge University Press, 2006, Series Da20 and Da644

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FIGURE 14

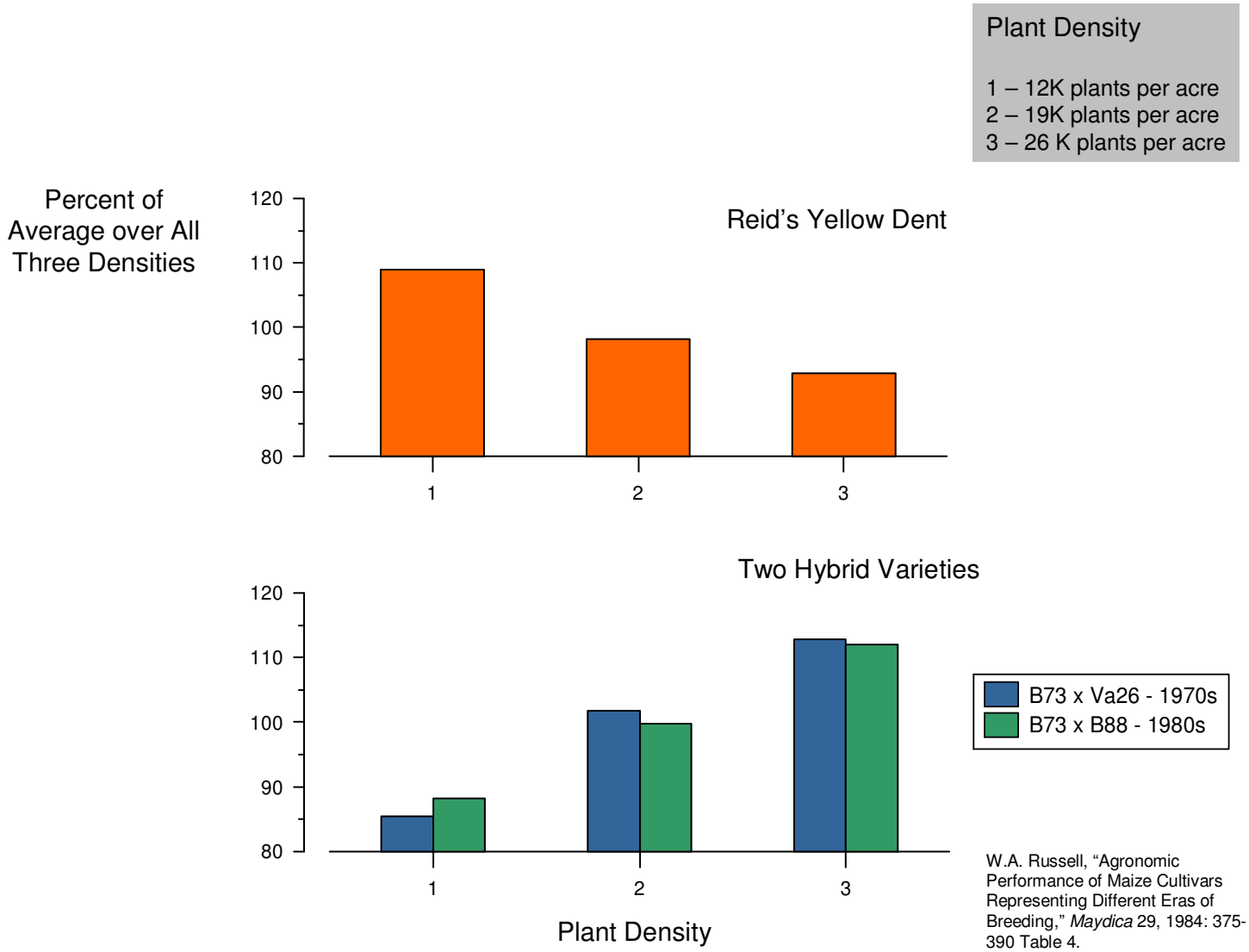

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FIGURE 15