

Table 1. Regression Estimates of Crop Weather Models for Corn Yield in Illinois, Indiana, and Iowa, 1960 - 2008

Independent Variable or Statistic	Coefficient Estimates					
	Illinois		Indiana		Iowa	
Constant	261.05	***	227.49	***	228.17	***
	(3.76)		(3.65)		(3.83)	
Annual Time Trend	1.90	***	1.73	***	2.01	***
	(23.74)		(19.00)		(22.77)	
Late Planting	-0.29	**	-0.18	***	-0.38	***
	-(3.21)		-(2.80)		-(3.16)	
Preseason Precipitation	1.32		3.36		6.48	**
	(0.44)		(1.17)		(2.11)	
Preseason Precipitation ²	-0.02		-0.07		-0.21	*
	-(0.23)		-(1.06)		-(1.83)	
April Precipitation	13.21	**	9.58	**	12.05	**
	(2.37)		(2.04)		(2.40)	
April Precipitation ²	-1.42	**	-1.04	*	-1.45	**
	-(2.07)		-(1.78)		-(2.09)	
June Precipitation	12.46	***	14.41	***	9.17	**
	(3.07)		(3.81)		(2.45)	
June Precipitation ²	-1.34	***	-1.50	**	-0.80	**
	-(3.07)		-(3.46)		-(2.28)	
July Precipitation	19.97	**	15.62	***	17.41	***
	(3.38)		(4.54)		(6.55)	
July Precipitation ²	-1.77	**	-1.25	***	-1.66	***
	-(2.66)		-(3.73)		-(6.36)	
August Precipitation	0.93		10.69	*	0.60	
	(0.17)		(1.84)		(0.22)	
August Precipitation ²	0.00		-1.24	*	0.03	
	(0.00)		-(1.73)		(0.12)	
July Temperature	-1.75	**	-2.04	***	-2.16	***
	-(2.46)		-(2.97)		-(3.40)	
August Temperature	-2.42	***	-2.13	***	-1.85	***
	-(4.62)		-(3.89)		-(3.56)	
R ²	0.96		0.95		0.96	
Standard Error (bu./acre)	7.30		7.42		7.74	
Regression F-statistic	54.17	***	44.95	***	54.39	***

Note: The figures in parantheses are t-statistics. One, two, and three stars denote statistical significance at the 10%, 5%, and 1% levels, respectively. Monthly precipitation variables are stated in inches and monthly temperature variables are stated in degrees Farenheit. Preseason precipitation is the sum of precipitation over September (previous crop year) through March (current crop year). Late planting is measured as the % planted after May 30th from 1960-1985 and after May 20th from 1986-2008.

Table 2. Alternative Forecasts of 2009 Corn Yield in Illinois, Indiana, Iowa, and 2009 U.S. Corn Yield and Production

	Trend	June-August Weather		
		Average	Poor	Good
Panel A. State Yield Forecasts				
Illinois (bu./acre)	166.3	155.3	133.8	171.6
Indiana (bu./acre)	156.8	151.7	131.8	164.2
Iowa (bu./acre)	167.9	174.7	157.1	187.0
3-State Average (bu./acre)	NA	162.9	143.3	176.8
Panel B. U.S. Forecasts				
Yield (bu./acre)	154.9	148.6	130.7	161.3
Production (mil.bu.)	11,784	11,307	9,950	12,272

Notes: NA denotes 'not applicable.' See the text for a detailed explanation of each state yield forecast. The 3-state average forecasts are weighted by planted acreage for each state as reported in USDA's March 2009 *Prospective Plantings* report. U.S. production forecasts for 2009 assume 83.3 million planted and 76.1 million harvested acres, respectively.

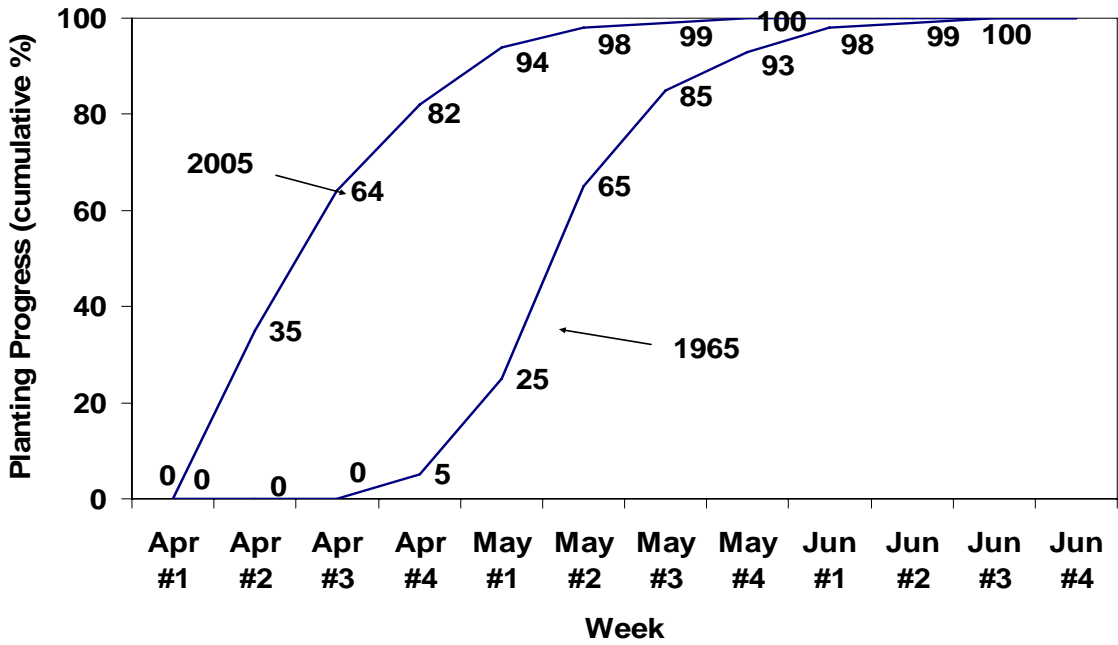
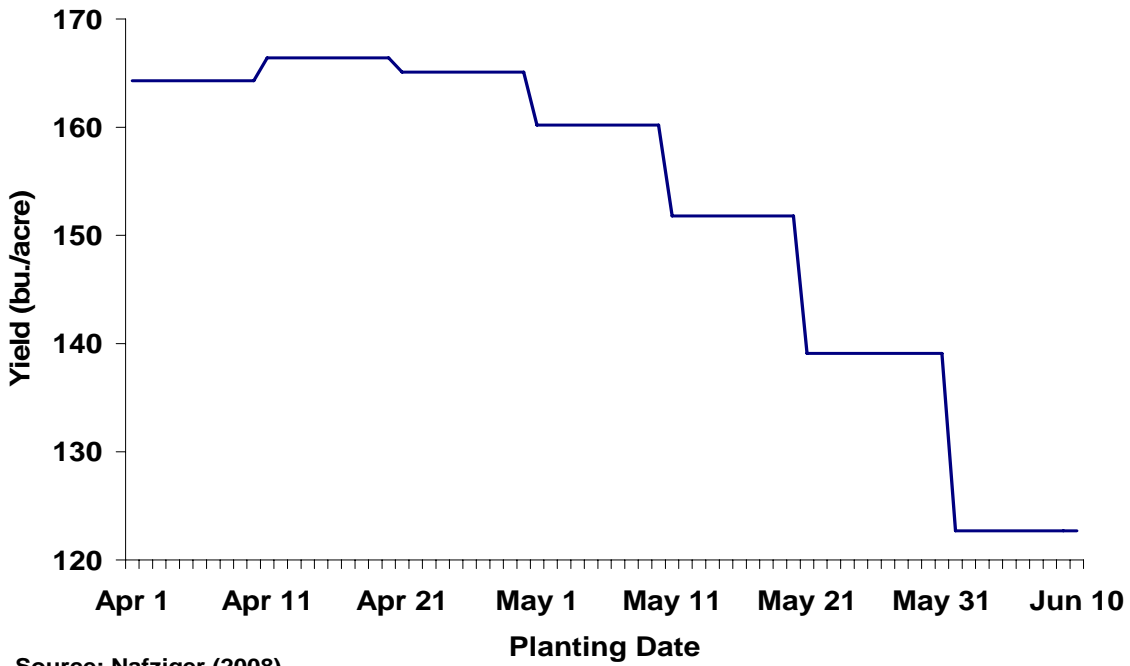


Figure 1. Comparison of Illinois Corn Planting Progress in 1965 and 2005



Source: Nafziger (2008)

Figure 2. Response of Corn Yield in Central Illinois to Planting Date

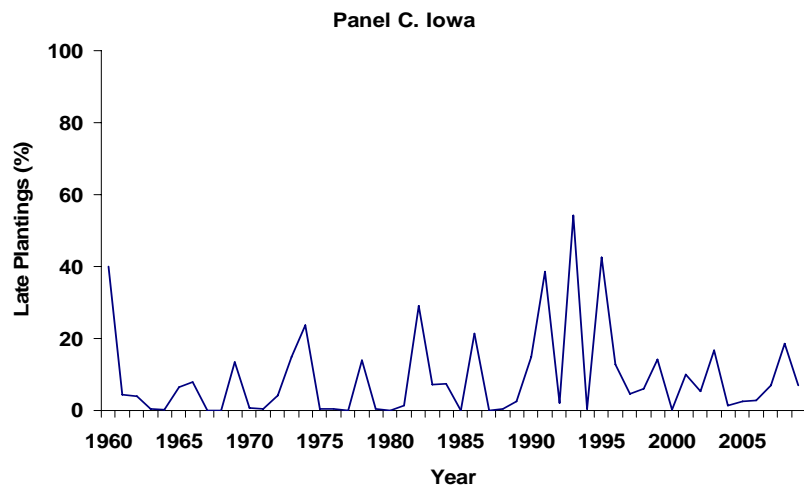
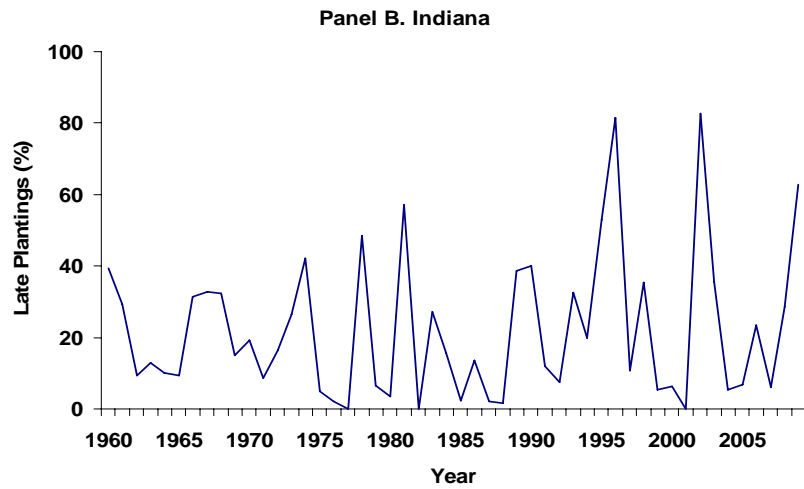
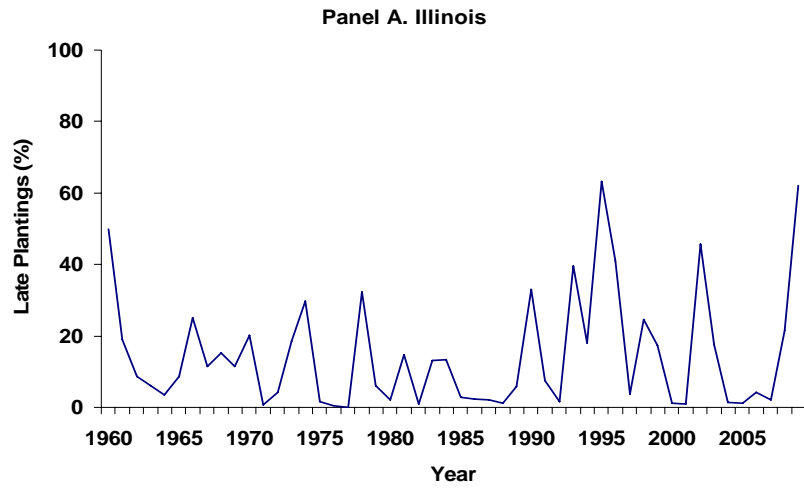


Figure 3. Proportion of Corn Planted after May 30th from 1960 - 1985 and after May 20th from 1986 - 2009 in Illinois, Indiana, and Iowa

Note: The X's indicate average values over 1960-2008.

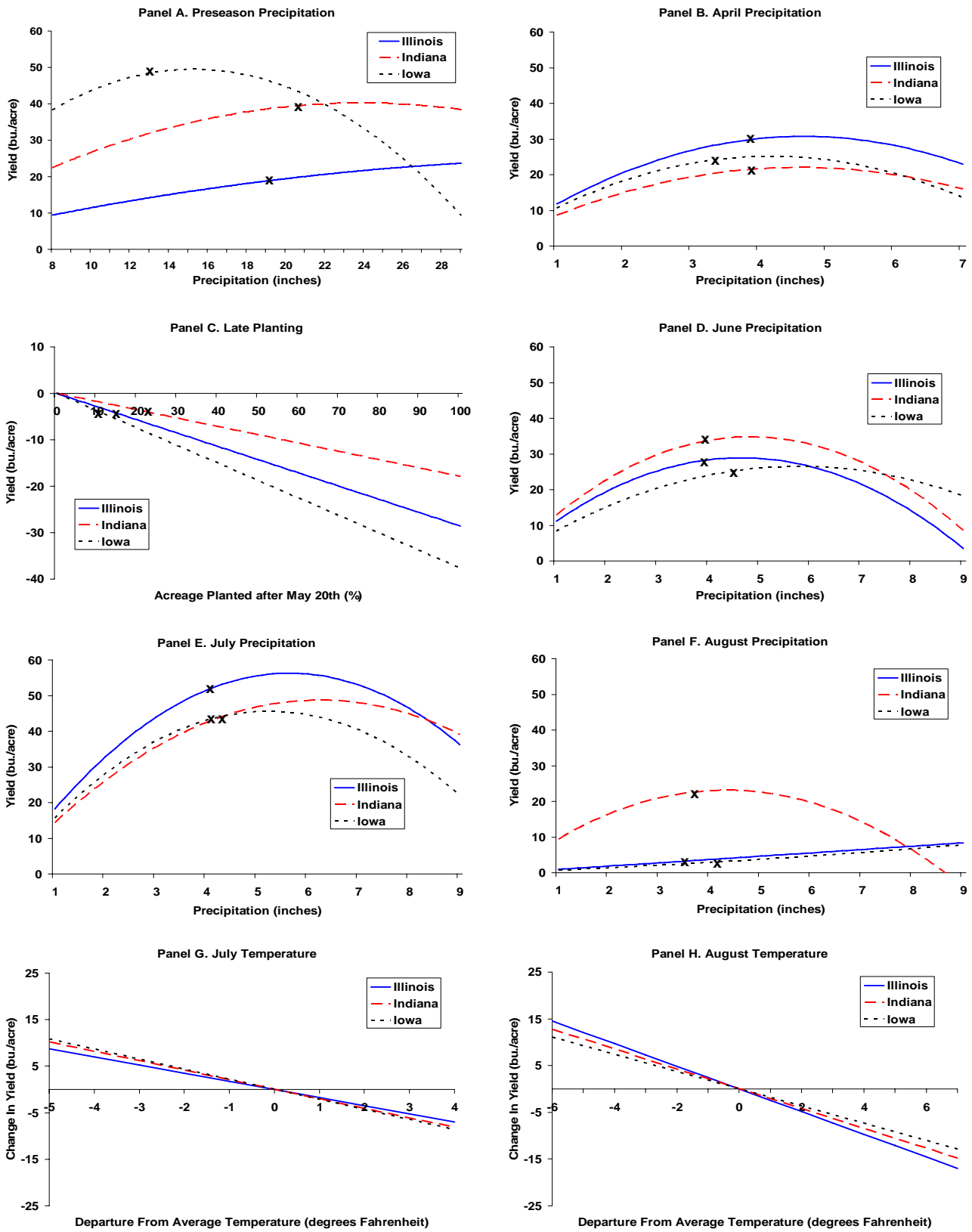


Figure 4. Estimated Impacts of Weather and Late Planting Variables on Corn Yield in Illinois, Indiana, and Iowa, 1960-2008

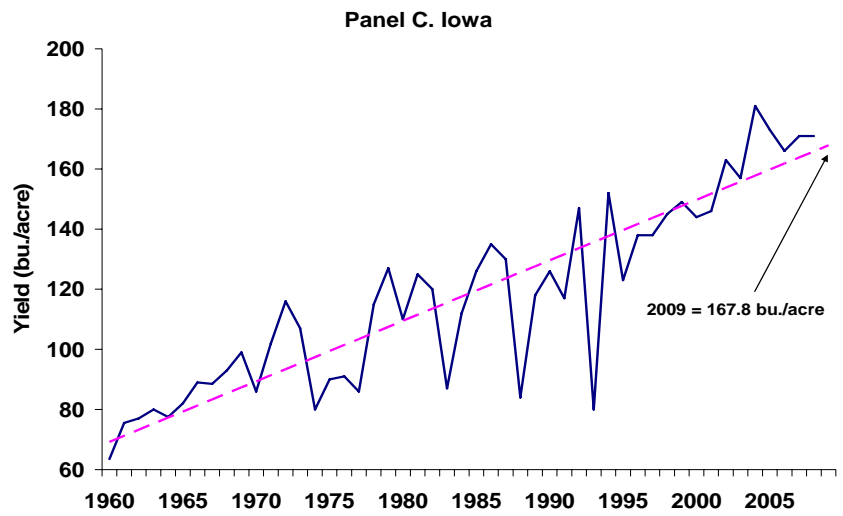
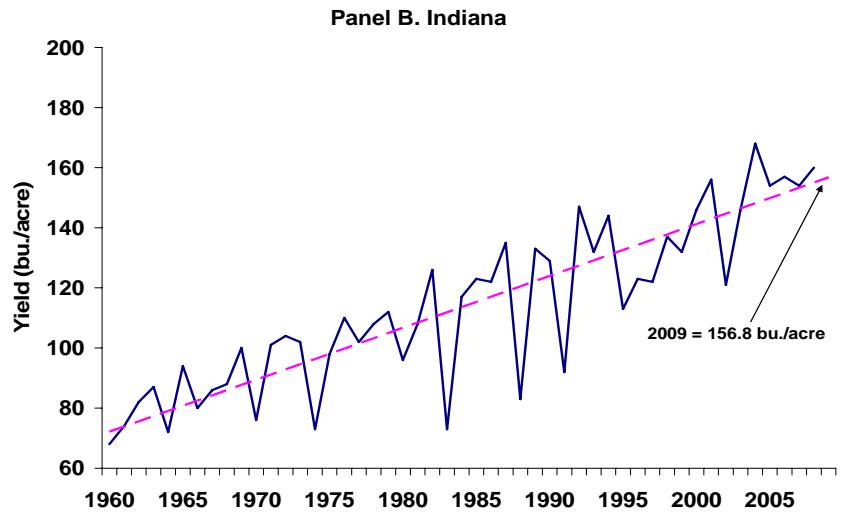
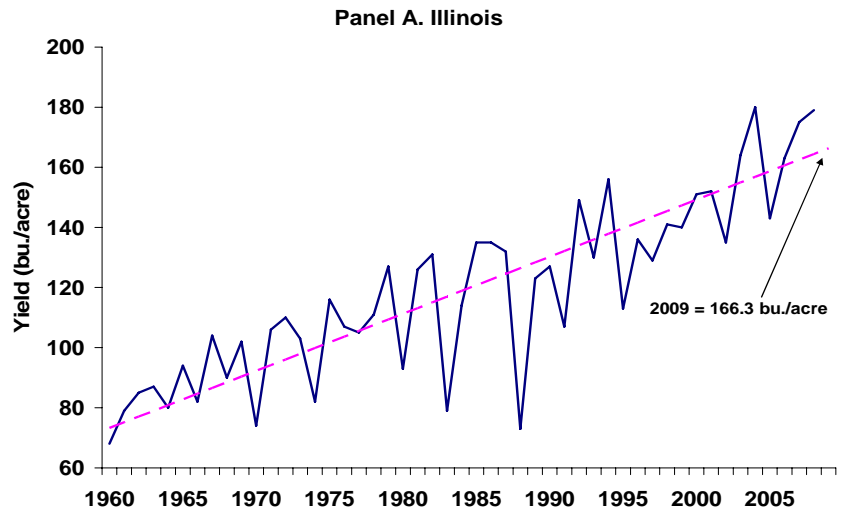


Figure 5. Actual and Trend Corn Yield in Illinois, Indiana, and Iowa, 1960-2008

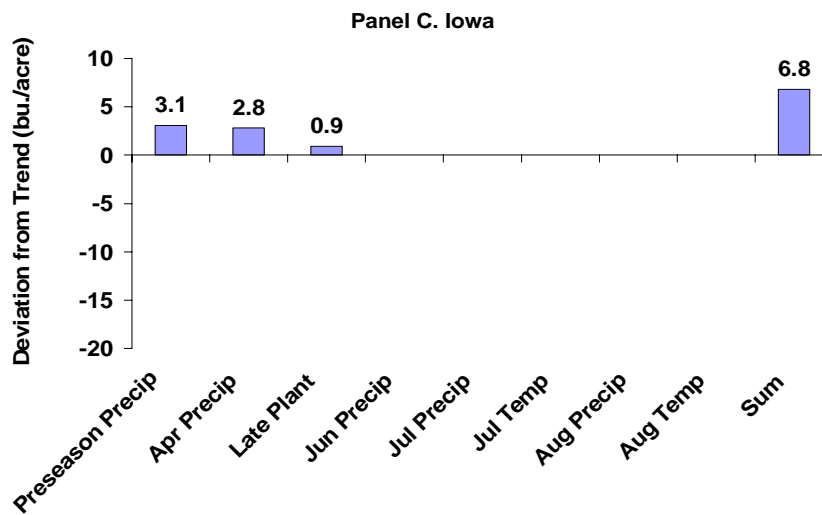
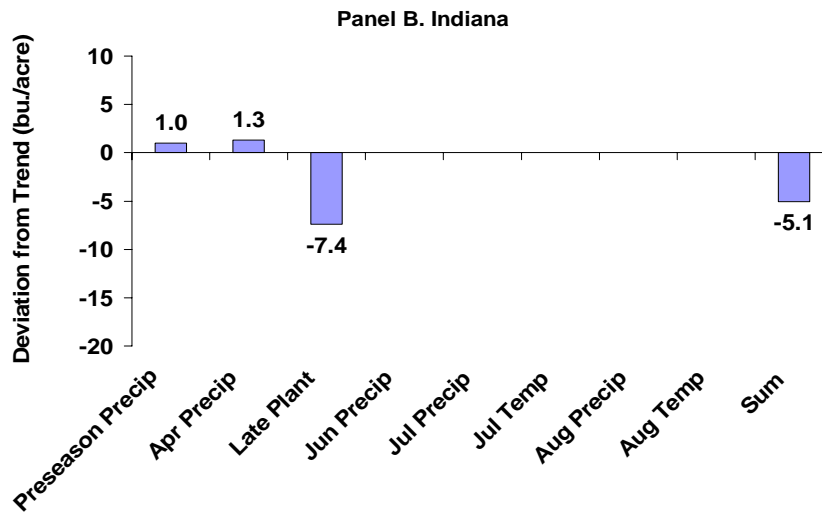
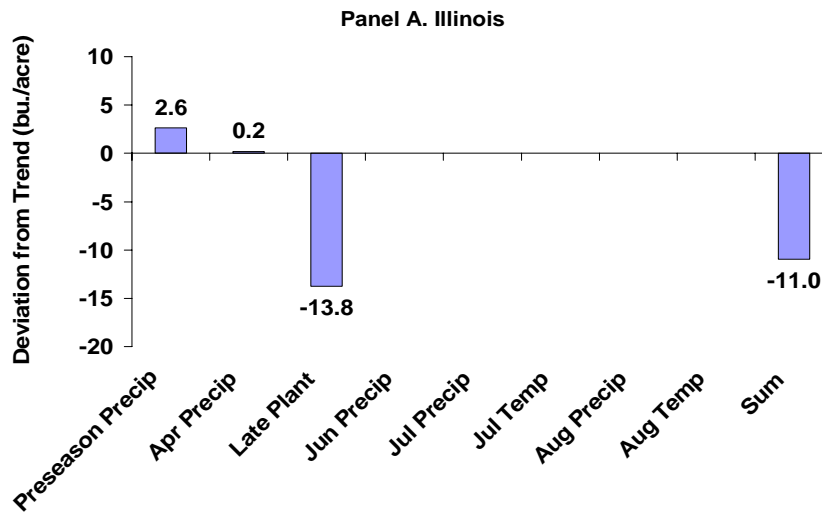


Figure 6. Estimated Impact of Monthly Weather and Late Planting Variables on Deviation from Trend Corn Yield in Illinois, Indiana, and Iowa in 2009