

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

Independent Variable or Statistic	Coefficient Estimates					
	Illinois		Indiana		Iowa	
Constant	28.31		10.87		29.10	
	(1.15)		(0.49)		(1.21)	
Annual Time Trend	0.42	***	0.43	***	0.49	***
	(16.87)		(16.00)		(14.25)	
Late Planting	-0.04	**	-0.07	***	-0.07	**
	-(2.15)		-(4.29)		-(2.11)	
Preseason Precipitation	1.84	*	0.67		2.12	*
	(1.74)		(0.64)		(1.73)	
Preseason Precipitation ²	-0.04		-0.01		-0.06	
	-(1.57)		-(0.46)		-(1.54)	
June Precipitation	0.96		4.64	***	2.01	
	(0.76)		(4.11)		(1.36)	
June Precipitation ²	-0.06		-0.45	**	-0.17	
	-(0.47)		-(3.47)		-(1.21)	
July Precipitation	3.86	**	3.90	***	3.19	***
	(2.12)		(3.87)		(3.18)	
July Precipitation ²	-0.33		-0.35	***	-0.32	**
	-(1.63)		-(3.60)		-(3.29)	
August Precipitation	1.84		3.96	**	2.99	*
	(1.10)		(2.35)		(2.85)	
August Precipitation ²	-0.11		-0.38	*	-0.21	**
	-(0.54)		-(1.82)		-(2.08)	
July Temperature	-0.01		-0.07		-0.37	
	-(0.04)		-(0.33)		-(1.52)	
August Temperature	-0.55	**	-0.25		-0.19	
	-(3.40)		-(1.56)		-(0.95)	
R ²	0.91		0.93		0.88	
Standard Error (bu./acre)	2.30		2.22		3.08	
Regression F-statistic	31.67	***	41.36	***	21.61	***

Note: The figures in parentheses 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 Fahrenheit. 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 June 10th from 1960-1985 and after May 30th from 1986-2008.

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

	Trend	June-August Weather		
		Average	Poor	Good
Panel A. State Yield Forecasts				
Illinois (bu./acre)	47.4	46.5	43.0	49.6
Indiana (bu./acre)	47.4	47.4	44.7	49.7
Iowa (bu./acre)	50.0	51.9	48.2	54.9
3-State Average (bu./acre)	NA	48.9	45.5	51.8
Panel B. U.S. Forecasts				
Yield (bu./acre)	42.2	42.2	39.2	44.7
Production (mil.bu.)	3,231	3,231	3,004	3,421

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 June 2009 *Acreage* report. U.S. production forecasts for 2009 assume 77.5 million planted and 76.6 million harvested acres, respectively. These figures are also drawn from USDA's June 2009 *Acreage* report.

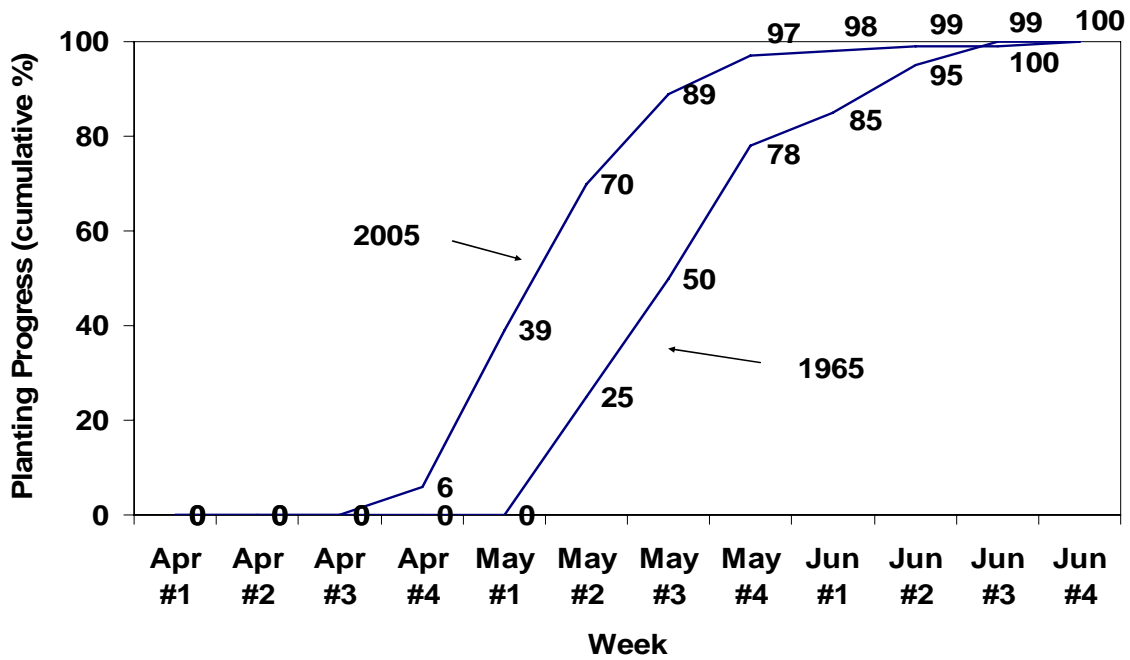
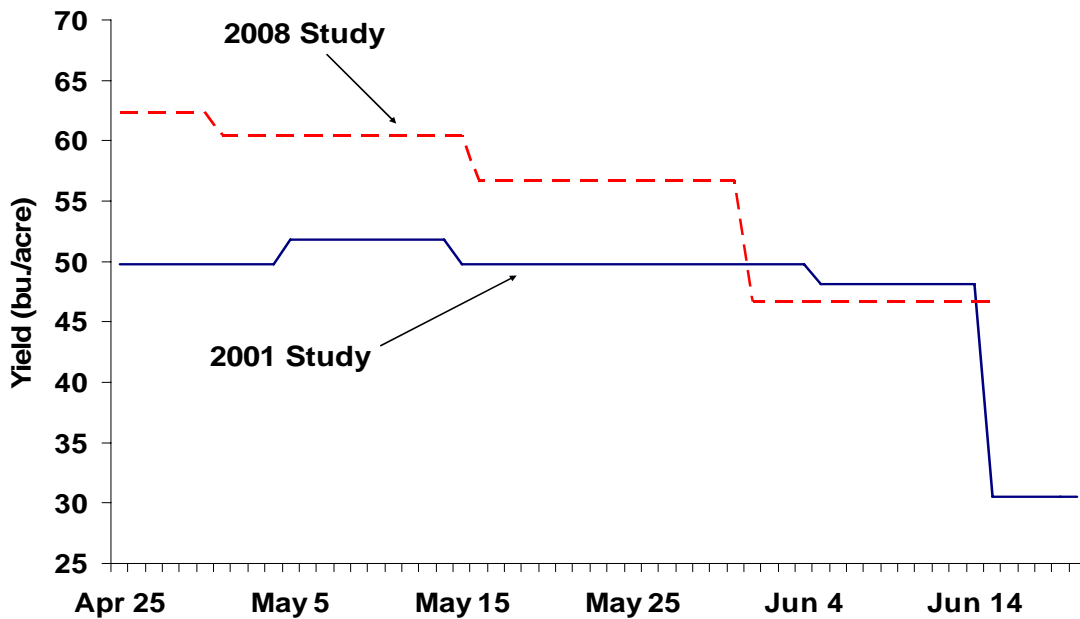


Figure 1. Comparison of Illinois Soybean Planting Progress in 1965 and 2005



Sources: Pecinovsky and Benson (2001) **Planting Date**
De Bruin and Pederson (2008)

Figure 2. Response of Soybean Yield in Iowa to Planting Date

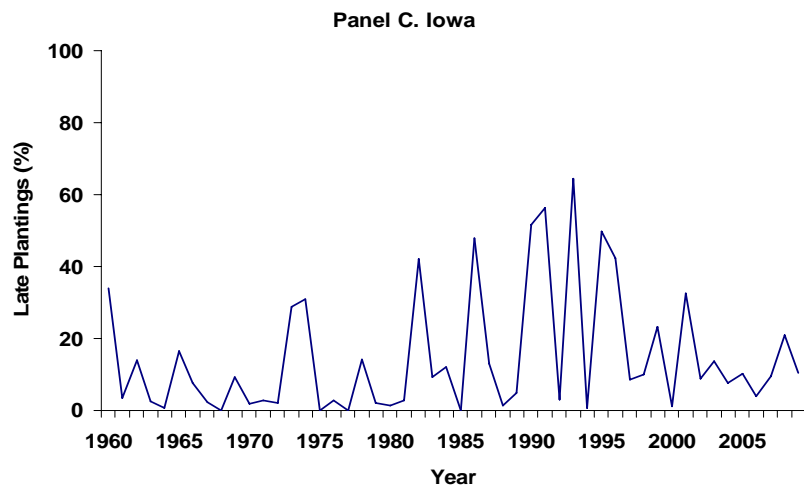
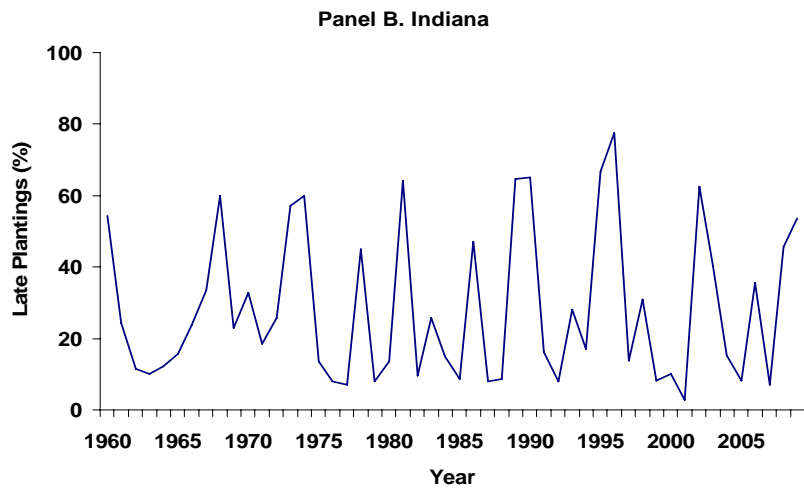
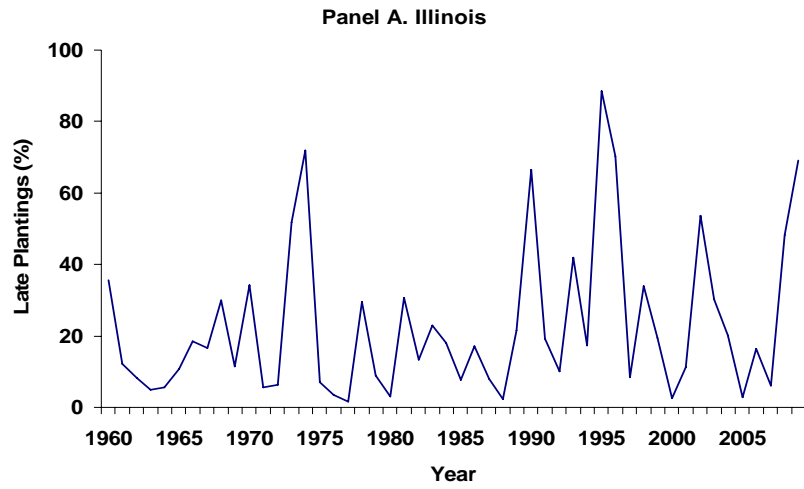


Figure 3. Proportion of Soybeans Planted after June 10th from 1960 - 1985 and after May 30th from 1986 - 2009 in Illinois, Indiana, and Iowa

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

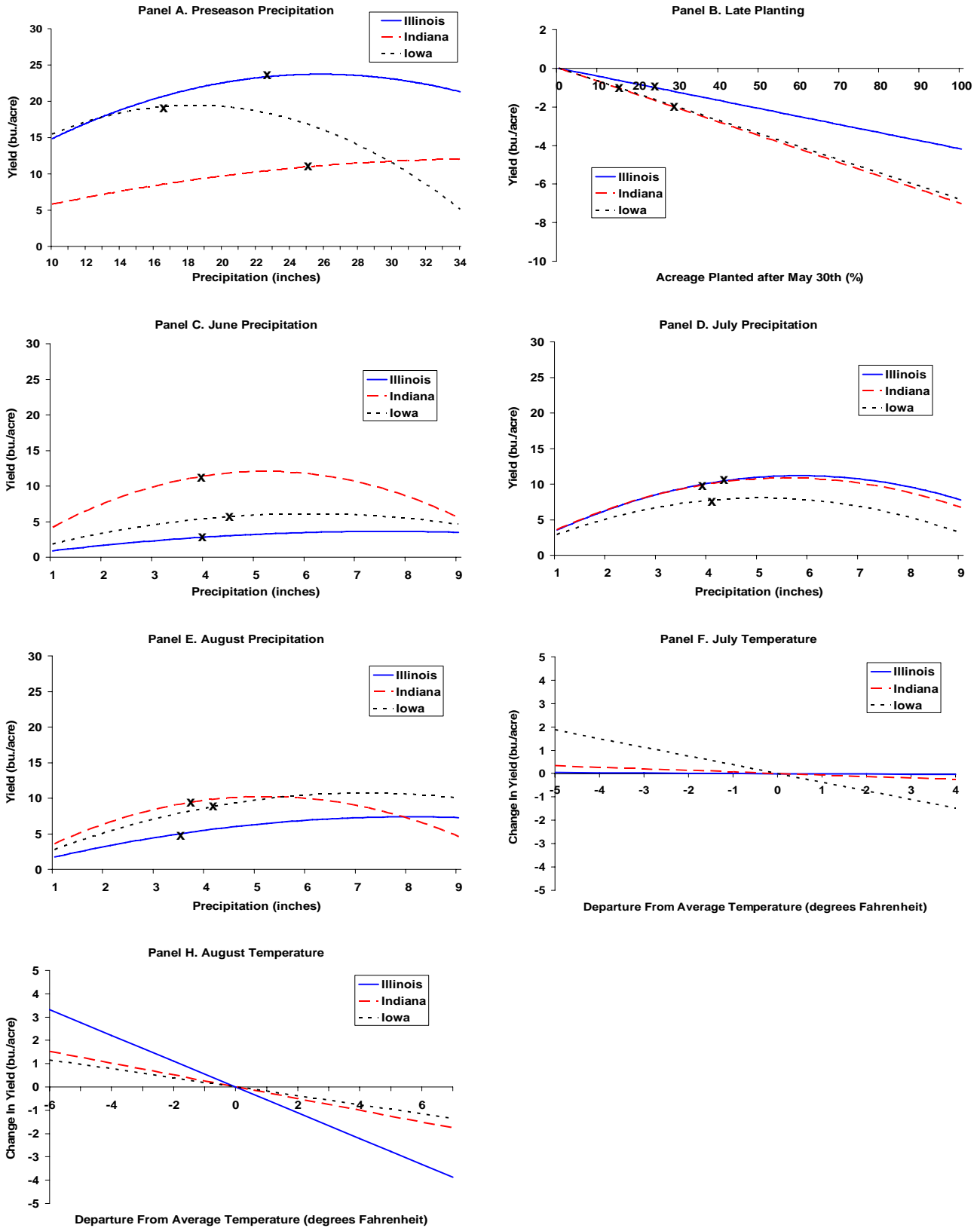


Figure 4. Estimated Impacts of Weather and Late Planting Variables on Soybean Yield in Illinois, Indiana, and Iowa, 1960-2008

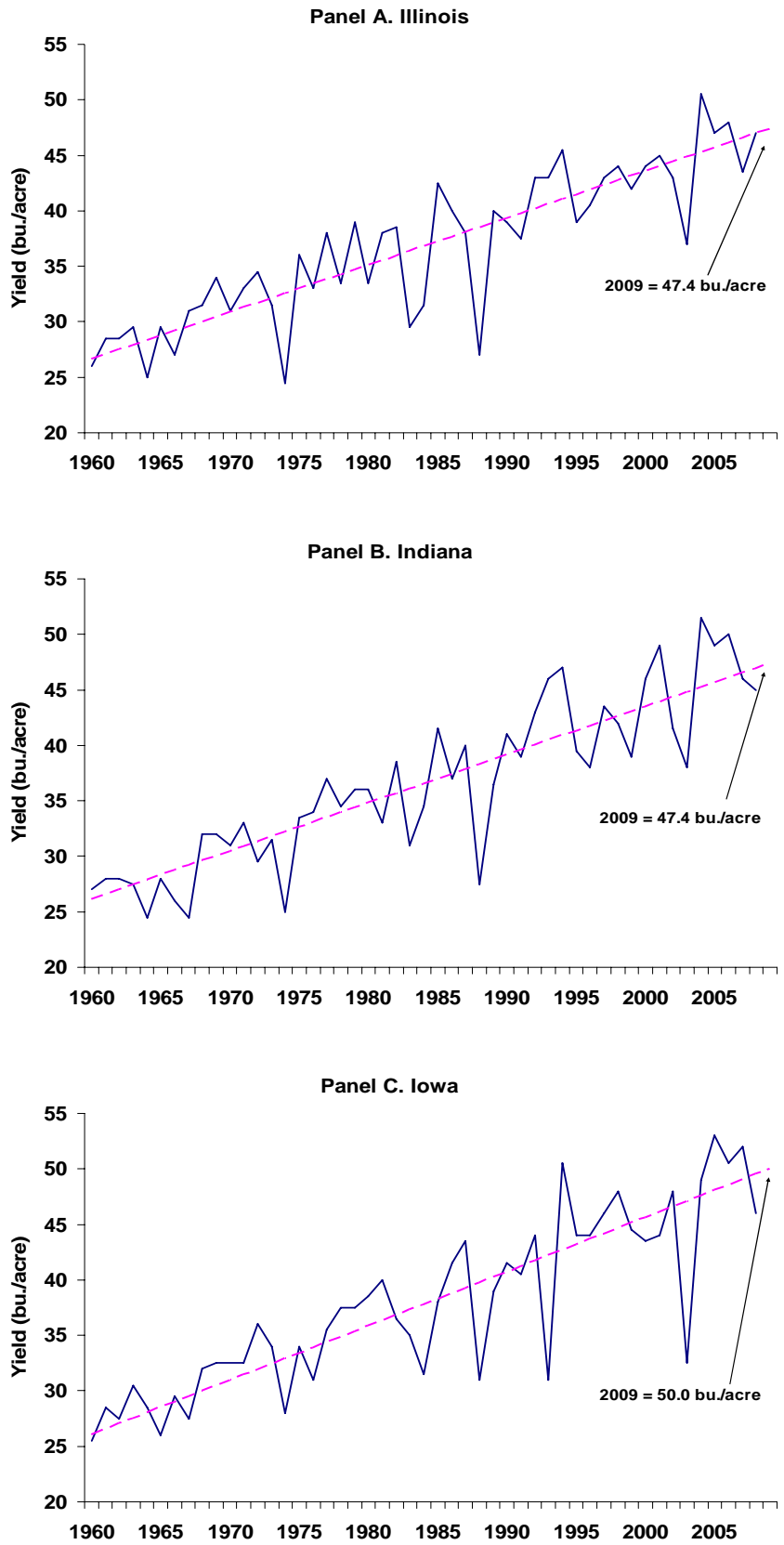


Figure 5. Actual and Trend Soybean Yield in Illinois, Indiana, and Iowa, 1960-2008

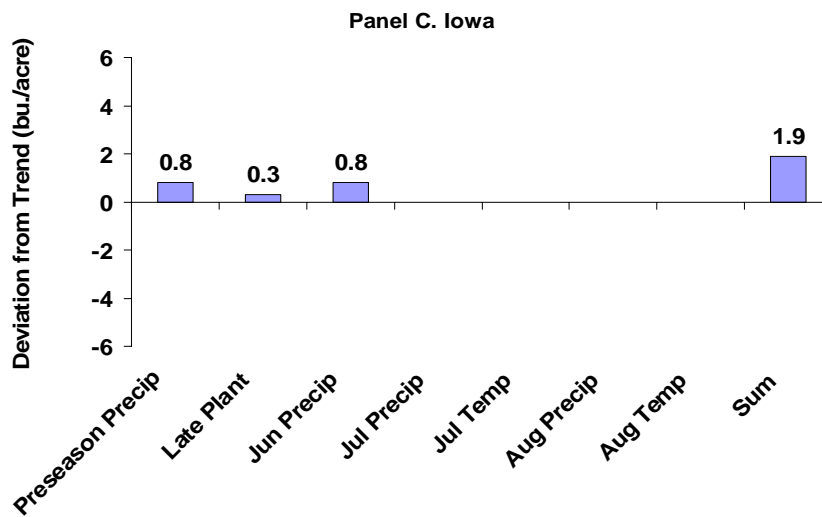
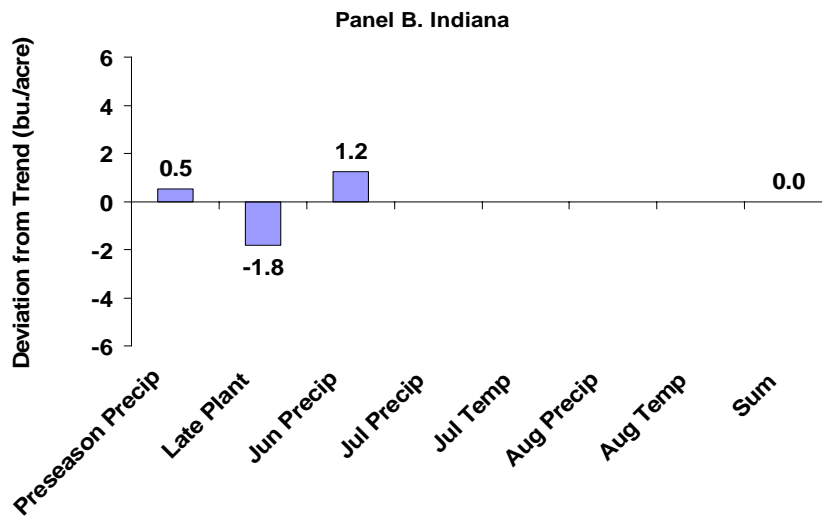
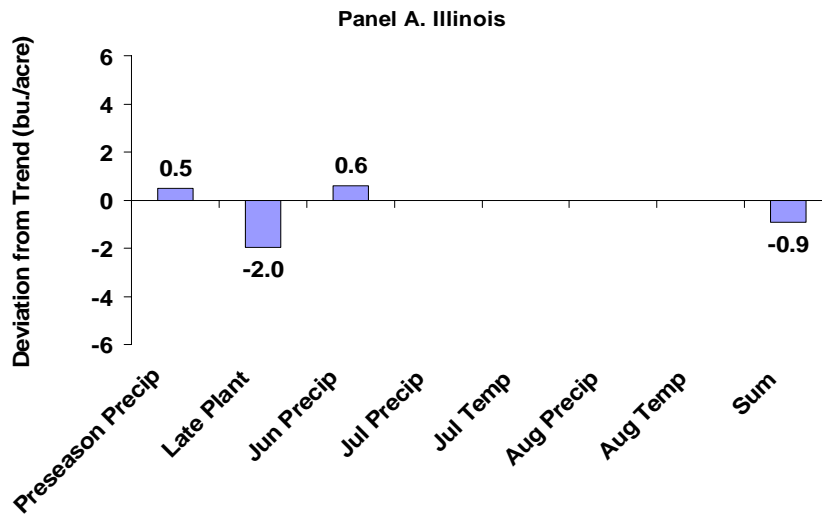


Figure 6. Estimated Impact of Monthly Weather and Late Planting Variables on Deviation from Trend Soybean Yield in Illinois, Indiana, and Iowa in 2009