Federal Crop Insurance and the Disincentive to Adapt to Extreme Heat

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Online Appendix

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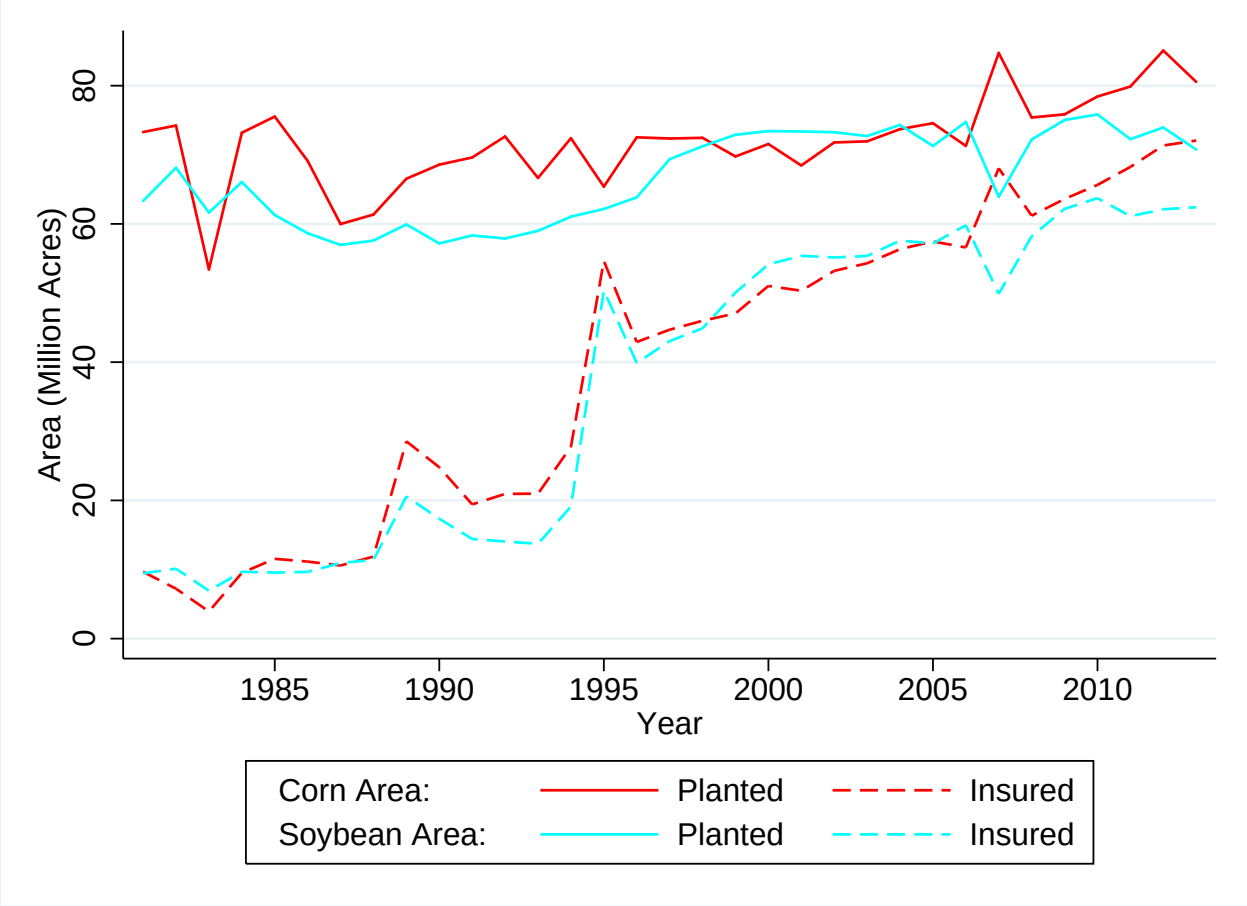
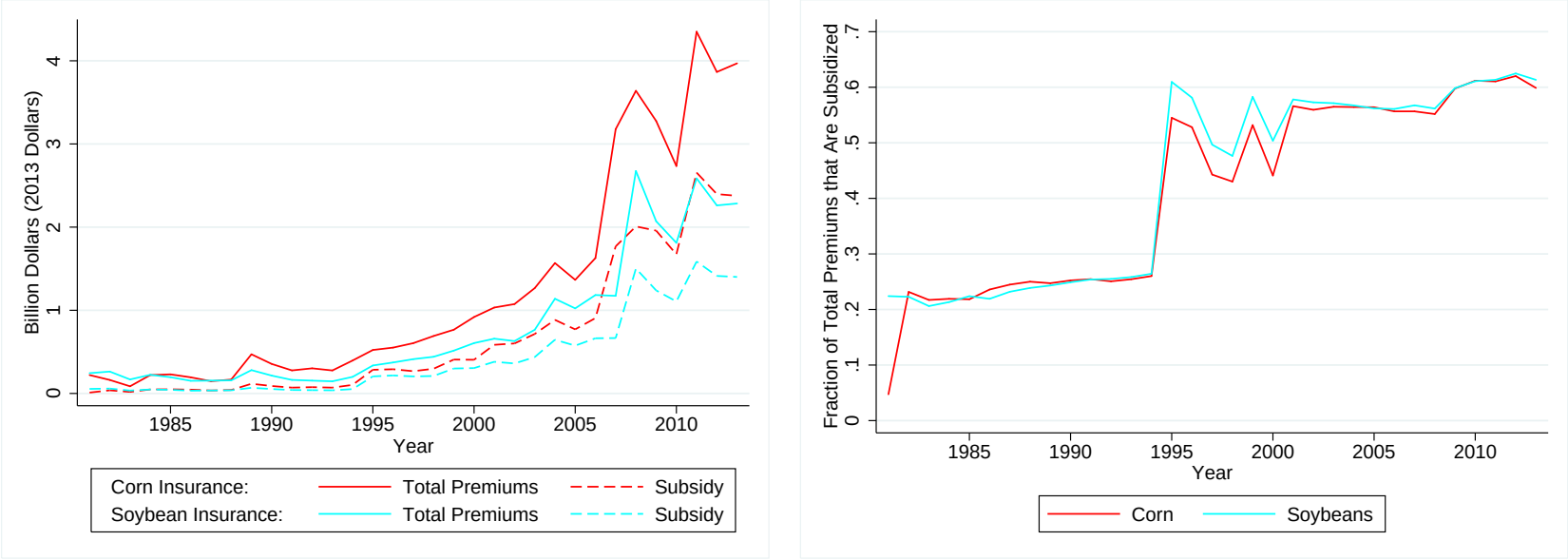
Figure A1: Area Insured under the Federal Crop Insurance Program



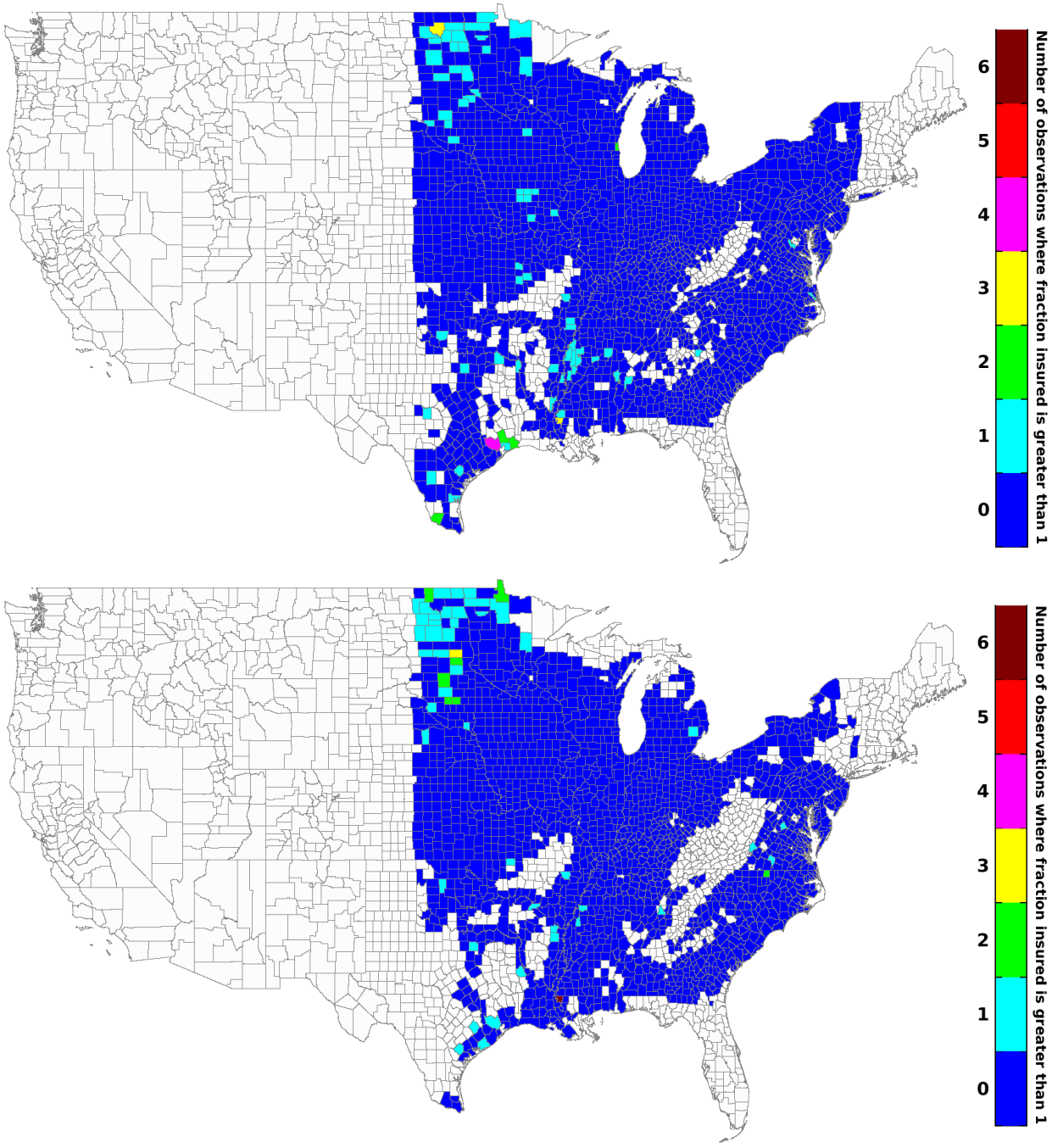
Notes: Figure displays both the total area planted (solid line) as well as the area insured (dashed line) for corn and soybeans in 1981-2013. Corn is shown in red, soybeans in light blue. We sum all counties east of the 100 degree meridian except Florida. The counties are shown in Figure A3 below.

Figure A2: Federal Crop Insurance Premiums and Subsidies



Notes: The left graph displays total premiums (solid line) as well as total subsidies (dashed line) for corn and soybeans in 1981-2013. The right graph shows the fraction of total premiums to subsidies. Corn is shown in red, soybeans in light blue. We sum all counties east of the 100 degree meridian except Florida. The counties are shown in Figure A3 below.

Figure A3: Counties Where Area Insured is Greater than Maximum Planting Area



Notes: Figure displays the number of times the insured area from RMA exceeds the maximum of the reported planting area from NASS for a county. The top graph shows results for corn, the bottom for soybeans. Note that the RMA data relies on actual insurance contracts in a year, while NASS uses a representative survey each year to estimate the number of planted acres.

Table A1: Panel Regression for Corn Yields 1989-2013

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.290**	0.381***	0.398***	0.200	0.331**	0.401***
	(0.127)	(0.130)	(0.139)	(0.149)	(0.138)	(0.148)
x fraction insured				0.204*	0.129	-0.006
				(0.120)	(0.092)	(0.109)
Extreme heat	-0.469***	-0.466***	-0.476***	-0.347***	-0.350***	-0.369***
	(0.058)	(0.056)	(0.053)	(0.062)	(0.051)	(0.054)
x fraction insured				-0.273***	-0.273***	-0.249***
				(0.075)	(0.070)	(0.092)
Precipitation	0.933***	0.933***	0.896***	1.768***	1.569***	1.584***
	(0.216)	(0.205)	(0.225)	(0.338)	(0.300)	(0.320)
x fraction insured				-1.944**	-1.493**	-1.590**
				(0.759)	(0.669)	(0.679)
Precipitation squared	-0.677***	-0.668***	-0.643***	-1.170***	-1.031***	-1.038***
	(0.173)	(0.165)	(0.179)	(0.240)	(0.200)	(0.212)
x fraction insured				1.145*	0.855*	0.917*
				(0.584)	(0.513)	(0.520)
R-squared	0.2078	0.2074	0.2246	0.2182	0.2171	0.2363
Observations	39702	39702	39702	39702	39702	39702
Counties	1717	1717	1717	1717	1717	1717
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table expands the results for corn in columns (1a) and (1b) of Table 1. It includes various time trends ranging from a common quadratic time trend in columns (a) to state and county-specific quadratic time trends in columns (b) and (c), respectively. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-29°C), extreme heat (degree days above 29°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Counties east of the 100 degree meridian except Florida are included if they report at least half (13 of the possible 25) observations in 1989-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A2: Panel Regression for Corn Yields 1981-2013

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.310***	0.379***	0.397***	0.279**	0.366***	0.428***
	(0.104)	(0.101)	(0.105)	(0.111)	(0.099)	(0.105)
x fraction insured				0.120	0.073	-0.071
				(0.109)	(0.080)	(0.076)
Extreme heat	-0.511***	-0.499***	-0.510***	-0.437***	-0.438***	-0.464***
	(0.060)	(0.061)	(0.059)	(0.071)	(0.062)	(0.064)
x fraction insured				-0.205***	-0.184***	-0.138*
				(0.077)	(0.064)	(0.077)
Precipitation	0.947***	0.984***	0.939***	1.469***	1.368***	1.315***
	(0.215)	(0.205)	(0.219)	(0.249)	(0.216)	(0.236)
x fraction insured				-1.608***	-1.174**	-1.112**
				(0.595)	(0.534)	(0.559)
Precipitation squared	-0.690***	-0.706***	-0.674***	-0.978***	-0.909***	-0.872***
	(0.176)	(0.169)	(0.179)	(0.190)	(0.161)	(0.173)
x fraction insured				0.896*	0.622	0.580
				(0.477)	(0.437)	(0.459)
R-squared	0.2226	0.2180	0.2333	0.2310	0.2232	0.2397
Observations	50588	50588	50588	50588	50588	50588
Counties	1694	1694	1694	1694	1694	1694
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A1 but expands the sample frame from 1989-2013 to 1981-2013. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-29°C), extreme heat (degree days above 29°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (17 of the possible 33) observations in 1981-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A3: Panel Regression for Corn Yields 1997-2013

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.189*	0.054	0.046	-0.044	-0.026	0.003
	(0.113)	(0.107)	(0.111)	(0.126)	(0.103)	(0.114)
x fraction insured				0.372**	0.140	0.056
				(0.164)	(0.107)	(0.129)
Extreme heat	-0.479***	-0.485***	-0.492***	-0.292***	-0.361***	-0.355***
	(0.065)	(0.051)	(0.051)	(0.060)	(0.048)	(0.056)
x fraction insured				-0.364***	-0.246***	-0.268***
				(0.132)	(0.086)	(0.084)
Precipitation	0.482***	0.417**	0.368*	0.522	0.414	0.365
	(0.185)	(0.199)	(0.215)	(0.356)	(0.372)	(0.440)
x fraction insured				-0.185	-0.063	-0.060
				(0.877)	(0.839)	(0.927)
Precipitation squared	-0.330**	-0.294*	-0.266	-0.210	-0.186	-0.160
	(0.154)	(0.164)	(0.175)	(0.267)	(0.282)	(0.335)
x fraction insured				-0.168	-0.166	-0.167
				(0.679)	(0.663)	(0.728)
R-squared	0.2349	0.2460	0.2641	0.2541	0.2569	0.2787
Observations	26822	26822	26822	26822	26822	26822
Counties	1721	1721	1721	1721	1721	1721
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A1 but restricts the sample frame from 1989-2013 to 1997-2013. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-29°C), extreme heat (degree days above 29°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (8 of the possible 17) observations in 1997-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A4: Panel Regression for Corn Yields 1981-1996

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.544***	0.521***	0.541***	0.425***	0.437***	0.444***
	(0.120)	(0.139)	(0.146)	(0.113)	(0.138)	(0.150)
x fraction insured				0.521***	0.385***	0.399**
				(0.095)	(0.114)	(0.166)
Extreme heat	-0.587***	-0.585***	-0.607***	-0.498***	-0.507***	-0.532***
	(0.061)	(0.059)	(0.062)	(0.065)	(0.063)	(0.065)
x fraction insured				-0.546***	-0.448***	-0.413***
				(0.088)	(0.105)	(0.139)
Precipitation	1.387***	1.488***	1.480***	1.426***	1.545***	1.544***
	(0.305)	(0.288)	(0.279)	(0.250)	(0.257)	(0.285)
x fraction insured				-0.203	-0.357	-0.527
				(0.784)	(0.744)	(0.822)
Precipitation squared	-1.028***	-1.092***	-1.095***	-0.950***	-1.016***	-1.006***
	(0.226)	(0.214)	(0.208)	(0.176)	(0.179)	(0.197)
x fraction insured				-0.422	-0.334	-0.296
				(0.563)	(0.510)	(0.568)
R-squared	0.2372	0.2431	0.2660	0.2557	0.2556	0.2767
Observations	24328	24328	24328	24328	24328	24328
Counties	1669	1669	1669	1669	1669	1669
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A1 but changes the sample frame from 1989-2013 to 1981-1996. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-29°C), extreme heat (degree days above 29°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (8 of the possible 16) observations in 1981-1996. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A5: Panel Regression for Corn Yields - Counties With Fraction Insured ≤ 1

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.279**	0.355***	0.370***	0.176	0.297**	0.363***
	(0.129)	(0.125)	(0.132)	(0.144)	(0.130)	(0.140)
x fraction insured				0.231**	0.147*	0.017
				(0.112)	(0.083)	(0.101)
Extreme heat	-0.472***	-0.469***	-0.477***	-0.345***	-0.346***	-0.363***
	(0.057)	(0.055)	(0.053)	(0.062)	(0.053)	(0.055)
x fraction insured				-0.286***	-0.290***	-0.269***
				(0.075)	(0.066)	(0.088)
Precipitation	0.901***	0.907***	0.876***	1.749***	1.613***	1.638***
	(0.213)	(0.203)	(0.221)	(0.328)	(0.307)	(0.328)
x fraction insured				-1.995***	-1.671**	-1.781***
				(0.715)	(0.655)	(0.669)
Precipitation squared	-0.649***	-0.647***	-0.626***	-1.163***	-1.066***	-1.081***
	(0.168)	(0.161)	(0.173)	(0.234)	(0.207)	(0.219)
x fraction insured				1.209**	1.000**	1.073**
				(0.546)	(0.495)	(0.502)
R-squared	0.2125	0.2120	0.2282	0.2224	0.2214	0.2393
Observations	38364	38364	38364	38364	38364	38364
Counties	1656	1656	1656	1656	1656	1656
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A1 but drops counties if they ever had a fraction insured larger than 1. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-29°C), extreme heat (degree days above 29°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (13 of the possible 25) observations in 1989-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A6: Panel Regression for Soybeans Yields 1989-2013

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.478***	0.541***	0.577***	0.402***	0.498***	0.542***
	(0.079)	(0.087)	(0.088)	(0.096)	(0.097)	(0.098)
x fraction insured				0.188**	0.129*	0.113
				(0.093)	(0.072)	(0.086)
Extreme heat	-0.592***	-0.613***	-0.623***	-0.508***	-0.517***	-0.526***
	(0.052)	(0.052)	(0.053)	(0.059)	(0.053)	(0.052)
x fraction insured				-0.204	-0.228**	-0.228**
				(0.130)	(0.101)	(0.095)
Precipitation	1.537***	1.411***	1.443***	2.077***	1.659***	1.661***
	(0.232)	(0.224)	(0.232)	(0.325)	(0.276)	(0.307)
x fraction insured				-1.262***	-0.557	-0.473
				(0.470)	(0.386)	(0.445)
Precipitation squared	-1.006***	-0.916***	-0.937***	-1.334***	-1.031***	-1.027***
	(0.158)	(0.151)	(0.159)	(0.244)	(0.200)	(0.223)
x fraction insured				0.763**	0.253	0.186
				(0.349)	(0.276)	(0.317)
R-squared	0.2916	0.3030	0.3232	0.2957	0.3060	0.3260
Observations	34958	34958	34958	34958	34958	34958
Counties	1505	1505	1505	1505	1505	1505
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table expands the results for soybeans in columns (2a) and (2b) of Table 1. It includes various time trends ranging from a common quadratic time trend in columns (a) to state and county-specific quadratic time trends in columns (b) and (c), respectively. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-30°C), extreme heat (degree days above 30°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Counties east of the 100 degree meridian except Florida are included if they report at least half (13 of the possible 25) observations in 1989-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A7: Panel Regression for Soybeans Yields 1981-2013

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.440***	0.477***	0.508***	0.365***	0.448***	0.500***
	(0.060)	(0.052)	(0.052)	(0.071)	(0.063)	(0.063)
x fraction insured				0.189*	0.106	0.058
				(0.096)	(0.072)	(0.078)
Extreme heat	-0.606***	-0.624***	-0.634***	-0.555***	-0.566***	-0.578***
	(0.050)	(0.046)	(0.047)	(0.056)	(0.050)	(0.049)
x fraction insured				-0.167	-0.182*	-0.176*
				(0.140)	(0.109)	(0.099)
Precipitation	1.441***	1.394***	1.392***	1.779***	1.619***	1.594***
	(0.213)	(0.198)	(0.200)	(0.279)	(0.237)	(0.234)
x fraction insured				-1.028**	-0.678**	-0.582*
				(0.438)	(0.342)	(0.343)
Precipitation squared	-0.961***	-0.926***	-0.923***	-1.160***	-1.044***	-1.019***
	(0.146)	(0.137)	(0.139)	(0.207)	(0.175)	(0.174)
x fraction insured				0.595*	0.360	0.275
				(0.327)	(0.260)	(0.257)
R-squared	0.2832	0.2960	0.3146	0.2865	0.2979	0.3166
Observations	44471	44471	44471	44471	44471	44471
Counties	1481	1481	1481	1481	1481	1481
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A6 but expands the sample frame from 1989-2013 to 1981-2013. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-30°C), extreme heat (degree days above 30°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (17 of the possible 33) observations in 1981-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A8: Panel Regression for Soybeans Yields 1997-2013

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.323***	0.257**	0.267***	-0.116	-0.080	-0.151
	(0.086)	(0.100)	(0.103)	(0.114)	(0.117)	(0.123)
x fraction insured				0.671***	0.545***	0.668***
				(0.122)	(0.092)	(0.146)
Extreme heat	-0.582***	-0.588***	-0.592***	-0.329***	-0.366***	-0.372***
	(0.051)	(0.051)	(0.054)	(0.062)	(0.059)	(0.073)
x fraction insured				-0.497***	-0.429***	-0.423***
				(0.119)	(0.097)	(0.114)
Precipitation	1.465***	1.378***	1.401***	1.733***	1.707***	1.677***
	(0.230)	(0.257)	(0.271)	(0.373)	(0.333)	(0.367)
x fraction insured				-0.653	-0.682	-0.618
				(0.554)	(0.454)	(0.472)
Precipitation squared	-0.884***	-0.834***	-0.853***	-0.869***	-0.845***	-0.811***
	(0.155)	(0.176)	(0.186)	(0.279)	(0.251)	(0.277)
x fraction insured				0.062	0.062	-0.013
				(0.407)	(0.333)	(0.343)
R-squared	0.3386	0.3455	0.3674	0.3551	0.3559	0.3787
Observations	24121	24121	24121	24121	24121	24121
Counties	1528	1528	1528	1528	1528	1528
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A6 but restricts the sample frame from 1989-2013 to 1997-2013. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-30°C), extreme heat (degree days above 30°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (8 of the possible 17) observations in 1997-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A9: Panel Regression for Soybeans Yields 1981-1996

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.528***	0.599***	0.648***	0.459***	0.544***	0.587***
	(0.065)	(0.071)	(0.074)	(0.061)	(0.062)	(0.066)
x fraction insured				0.222**	0.176**	0.155*
				(0.105)	(0.089)	(0.090)
Extreme heat	-0.657***	-0.654***	-0.686***	-0.618***	-0.600***	-0.629***
	(0.046)	(0.043)	(0.042)	(0.043)	(0.041)	(0.036)
x fraction insured				-0.231	-0.332**	-0.314**
				(0.147)	(0.148)	(0.133)
Precipitation	1.222***	1.280***	1.268***	1.179***	1.314***	1.369***
	(0.245)	(0.223)	(0.209)	(0.299)	(0.267)	(0.234)
x fraction insured				0.159	-0.103	-0.407
				(0.727)	(0.740)	(0.723)
Precipitation squared	-0.891***	-0.902***	-0.906***	-0.771***	-0.824***	-0.863***
	(0.180)	(0.168)	(0.161)	(0.221)	(0.203)	(0.182)
x fraction insured				-0.646	-0.517	-0.365
				(0.577)	(0.589)	(0.573)
R-squared	0.2625	0.2708	0.3017	0.2701	0.2818	0.3133
Observations	21464	21464	21464	21464	21464	21464
Counties	1474	1474	1474	1474	1474	1474
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A6 but changes the sample frame from 1989-2013 to 1981-1996. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-30°C), extreme heat (degree days above 30°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (8 of the possible 16) observations in 1981-1996. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.

Table A10: Panel Regression for Soybean Yields - Counties With Fraction Insured ≤ 1

	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
Moderate heat	0.467***	0.512***	0.544***	0.376***	0.473***	0.520***
	(0.080)	(0.085)	(0.084)	(0.096)	(0.098)	(0.102)
x fraction insured				0.218**	0.119*	0.085
				(0.093)	(0.071)	(0.081)
Extreme heat	-0.588***	-0.608***	-0.619***	-0.506***	-0.514***	-0.526***
	(0.052)	(0.052)	(0.053)	(0.060)	(0.055)	(0.054)
x fraction insured				-0.207	-0.226**	-0.221**
				(0.129)	(0.103)	(0.095)
Precipitation	1.556***	1.432***	1.465***	1.961***	1.687***	1.721***
	(0.236)	(0.228)	(0.237)	(0.319)	(0.291)	(0.322)
x fraction insured				-0.973**	-0.578	-0.562
				(0.431)	(0.381)	(0.444)
Precipitation squared	-1.021***	-0.933***	-0.955***	-1.263***	-1.053***	-1.071***
	(0.161)	(0.153)	(0.161)	(0.237)	(0.208)	(0.232)
x fraction insured				0.575*	0.270	0.251
				(0.318)	(0.275)	(0.317)
R-squared	0.2951	0.3051	0.3254	0.2991	0.3079	0.3280
Observations	33955	33955	33955	33955	33955	33955
Counties	1461	1461	1461	1461	1461	1461
Quadratic Time Trend	Common	State	County	Common	State	County

Notes: Table replicates Table A6 but drops counties if they ever had a fraction insured larger than 1. It regresses county-level log yields on 4 weather variables: moderate heat (degree days 10-30°C), extreme heat (degree days above 30°C), and a quadratic in season-total precipitation for the months April-September. Columns (2) also include the interaction with the fraction of the area planted that is insured (ranging from 0 to 1). Ratios that are larger than one are top code at 1. All columns include county fixed effects and year fixed effects. Columns (a) include a common quadratic time trend, columns (b) and (c) allow the quadratic time trend to differ by state and county, respectively. Counties east of the 100 degree meridian except Florida are included if they report at least half (13 of the possible 25) observations in 1989-2013. The R-square is calculated without all time trends and fixed effects. Erros are clustered by state and shown in parentheses. Significance levels are indicated by *** 1%, ** 5%, * 10%.