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**CORN PRODUCTION INDICATORS REPORT:
APPENDIX III**



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Section III: North Dakota Counties Trend and Risk

Figure 1: North Dakota Planted & Harvested Acreage, Annual Trends

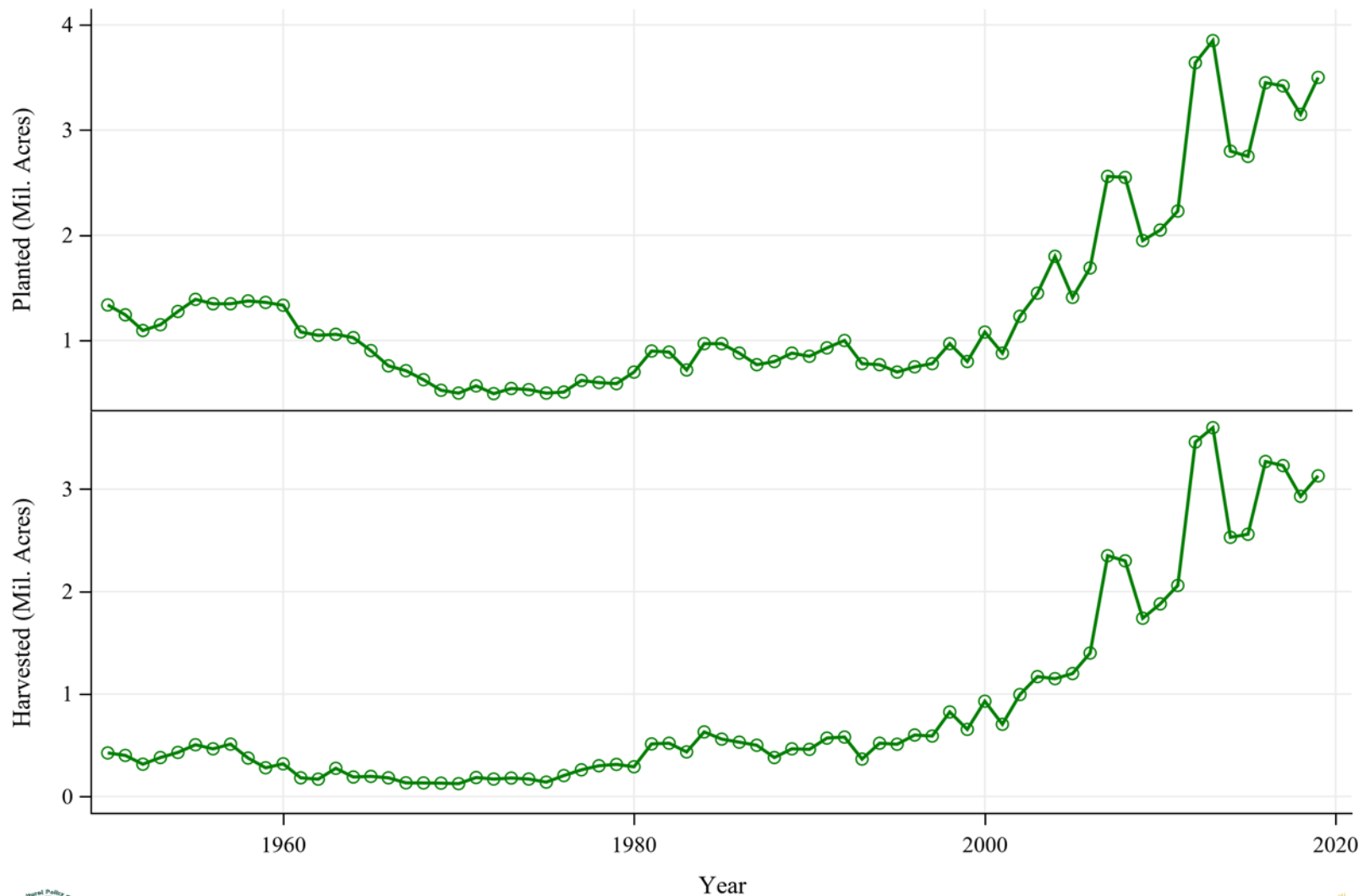
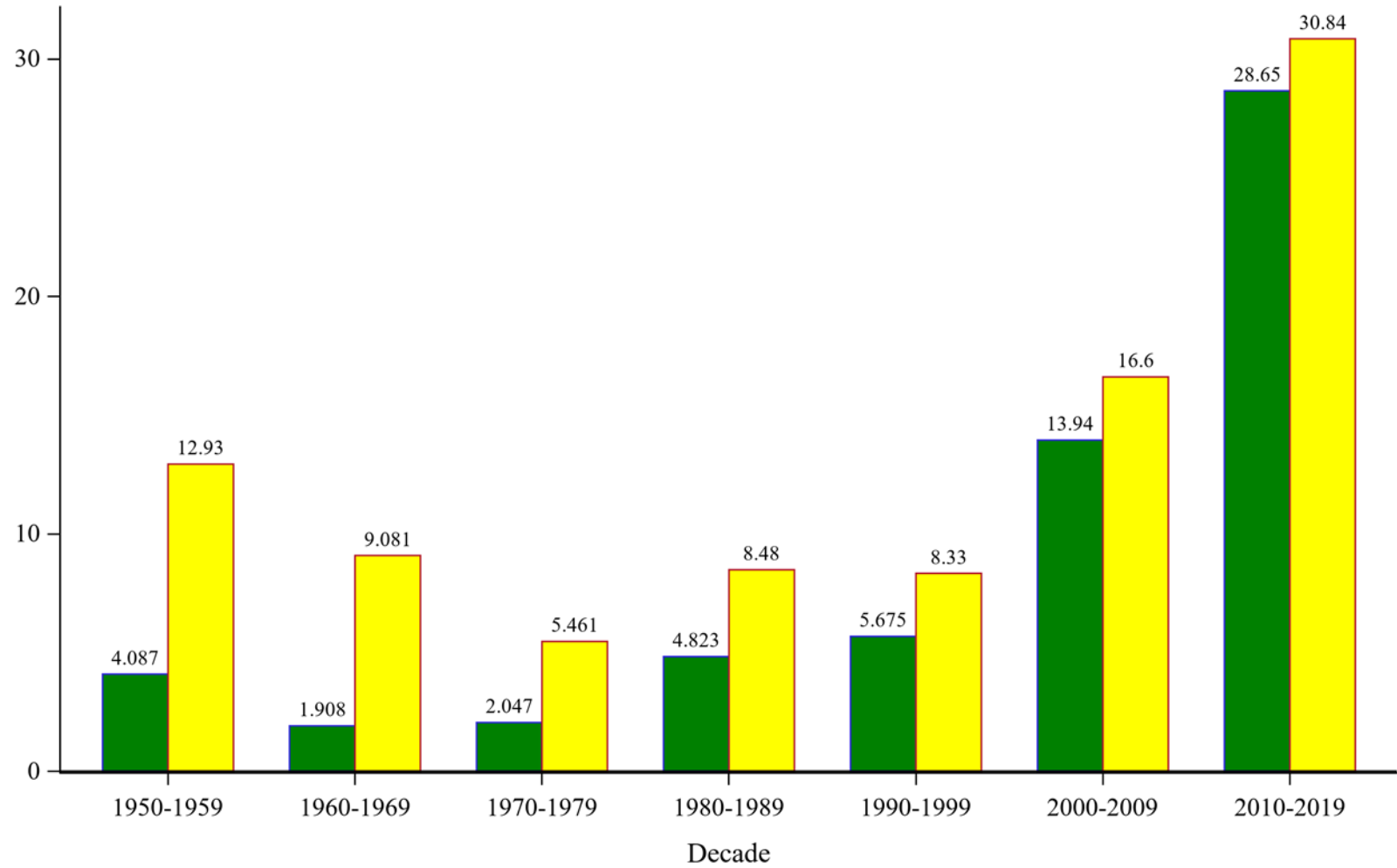


Figure 2: North Dakota Planted & Harvested Acreage, Decadal Changes



Group ■ Harvested (Mil. Acres) ■ Planted (Mil. Acres)
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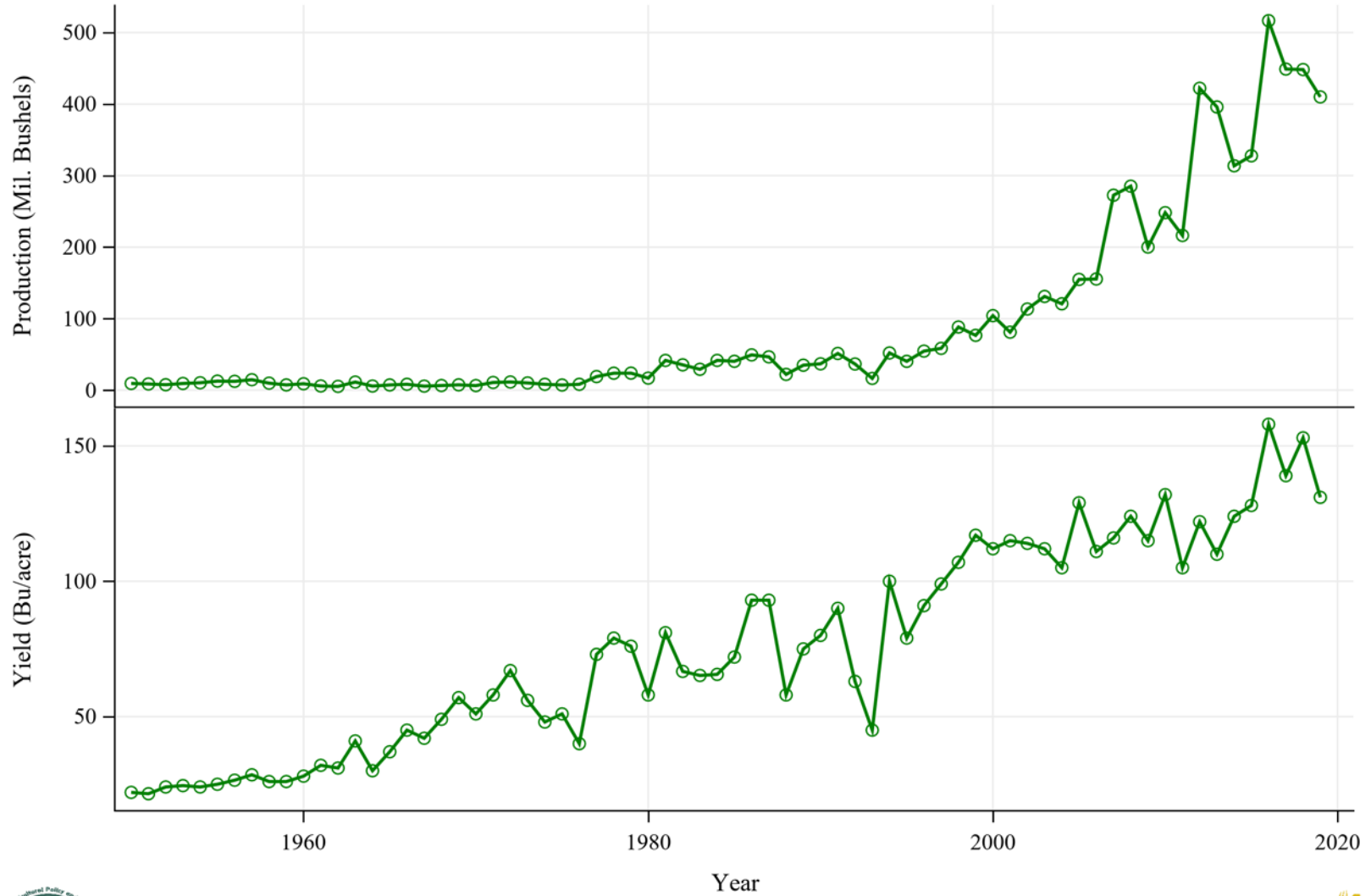
Table 1: Global Planted Acreage, Descriptive Statistics

Decade	Planted (Acres)				
	N	Sum	Mean	Risk	Coefficient of Variation
1950-1959	10	12,930,000	1,293,000	101,047	7.8
1960-1969	10	9,081,000	908,100	247,984	27.3
1970-1979	10	5,461,000	546,100	46,139	8.4
1980-1989	10	8,480,000	848,000	96,009	11.3
1990-1999	10	8,330,000	833,000	100,890	12.1
2000-2009	10	16,600,000	1,660,000	571,839	34.4
2010-2019	10	30,840,000	3,084,000	606,524	19.7

Table 2: North Dakota Harvested Acreage, Descriptive Statistics

Decade	Harvested (Acres)				
	N	Sum	Mean	Risk	Coefficient of Variation
1950-1959	10	4,087,000	408,700	75,270	18.4
1960-1969	10	1,908,000	190,800	62,073	32.5
1970-1979	10	2,047,000	204,700	64,819	31.7
1980-1989	10	4,823,000	482,300	95,909	19.9
1990-1999	10	5,675,000	567,500	121,935	21.5
2000-2009	10	13,940,000	1,394,000	562,839	40.4
2010-2019	10	28,650,000	2,865,000	585,894	20.5

Figure 3: North Dakota Production and Yield, Annual Trends



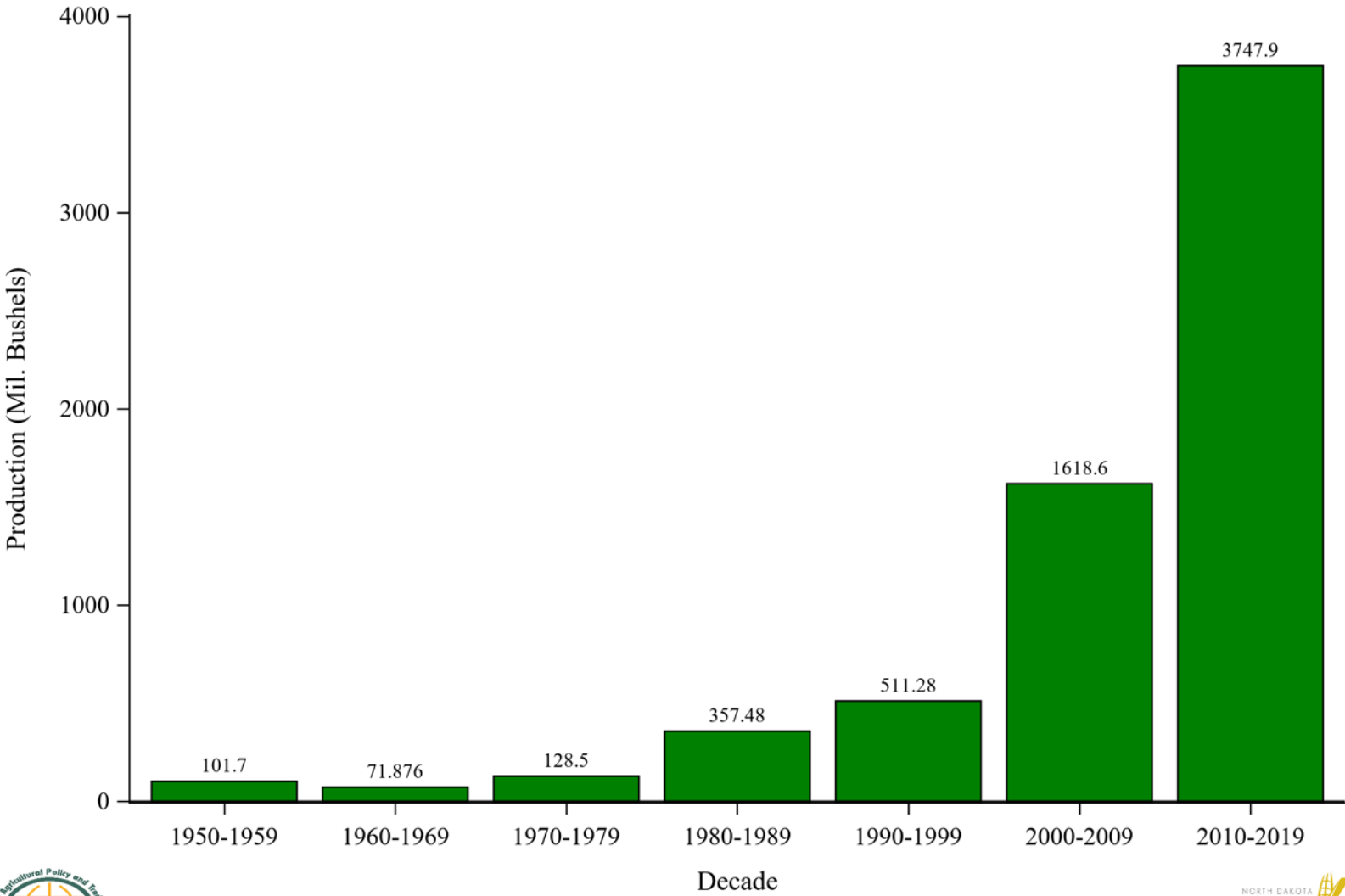
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Figure 4: North Dakota Production, Decadal Changes



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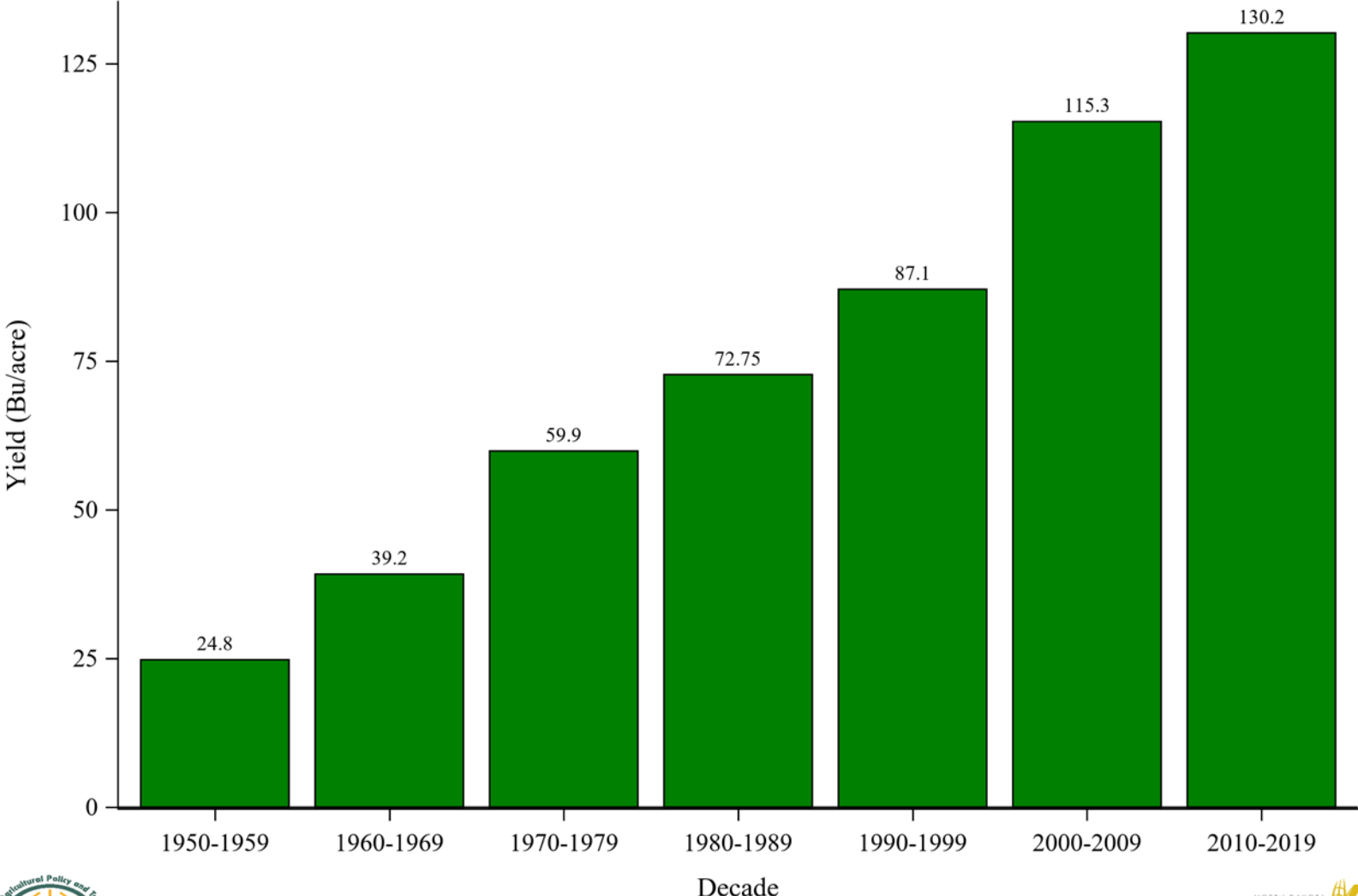
Table 3: North Dakota Production, Descriptive Statistics

Decade	Production (Bushels)				
	N	Sum	Mean	Risk	Coefficient of Variation
1950-1959	10	101,703,000	10,170,300	2,336,587	23.0
1960-1969	10	71,876,000	7,187,600	1,878,549	26.1
1970-1979	10	128,503,000	12,850,300	6,731,023	52.4
1980-1989	10	357,483,000	35,748,300	10,425,905	29.2
1990-1999	10	511,275,000	51,127,500	20,645,798	40.4
2000-2009	10	1,618,555,000	161,855,500	69,817,899	43.1
2010-2019	10	3,747,930,000	374,793,000	95,491,130	25.5

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Figure 5: North Dakota Yield, Decadal Changes



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Table 4: North Dakota Yield, Descriptive Statistics

Decade	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
1950-1959	10	24.80	2.10	8.5
1960-1969	10	39.20	9.38	23.9
1970-1979	10	59.90	13.17	22.0
1980-1989	10	72.75	12.80	17.6
1990-1999	10	87.10	21.32	24.5
2000-2009	10	115.30	6.77	5.9
2010-2019	10	130.20	16.76	12.9

Table 5: North Dakota Production Indicators, Annual Trends

Year	Planted (Acres)	Harvested (Acres)	Production (Bushels)	Yield (Bu/acre)
2010	2,050,000	1,880,000	248,160,000	132
2011	2,230,000	2,060,000	216,300,000	105
2012	3,640,000	3,460,000	422,120,000	122
2013	3,850,000	3,600,000	396,000,000	110
2014	2,800,000	2,530,000	313,720,000	124
2015	2,750,000	2,560,000	327,680,000	128
2016	3,450,000	3,270,000	516,660,000	158
2017	3,420,000	3,230,000	448,970,000	139
2018	3,150,000	2,930,000	448,290,000	153
2019	3,500,000	3,130,000	410,030,000	131

Figure 6: North Dakota Counties Planted Acreage, 1980 to 1989

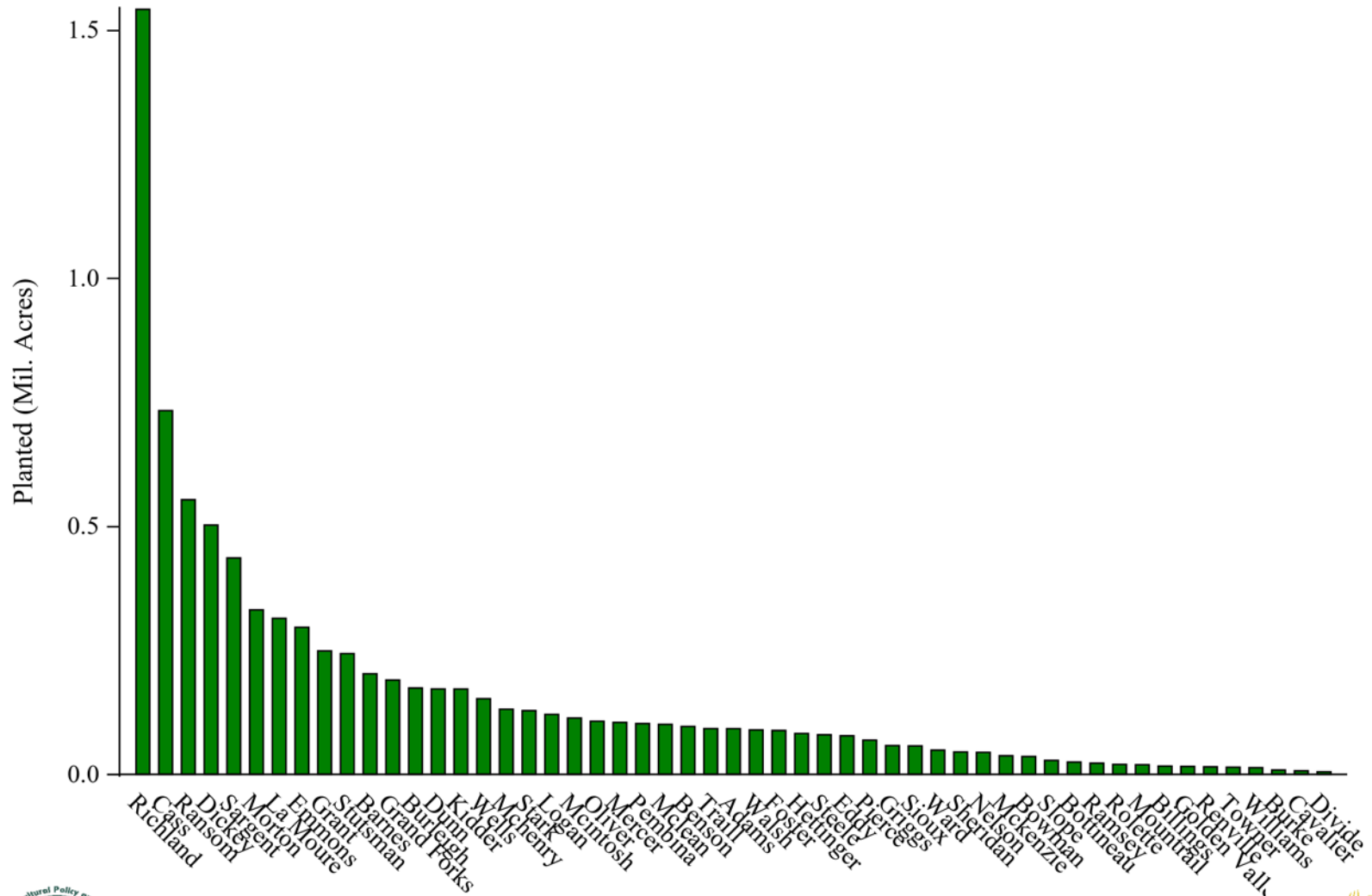


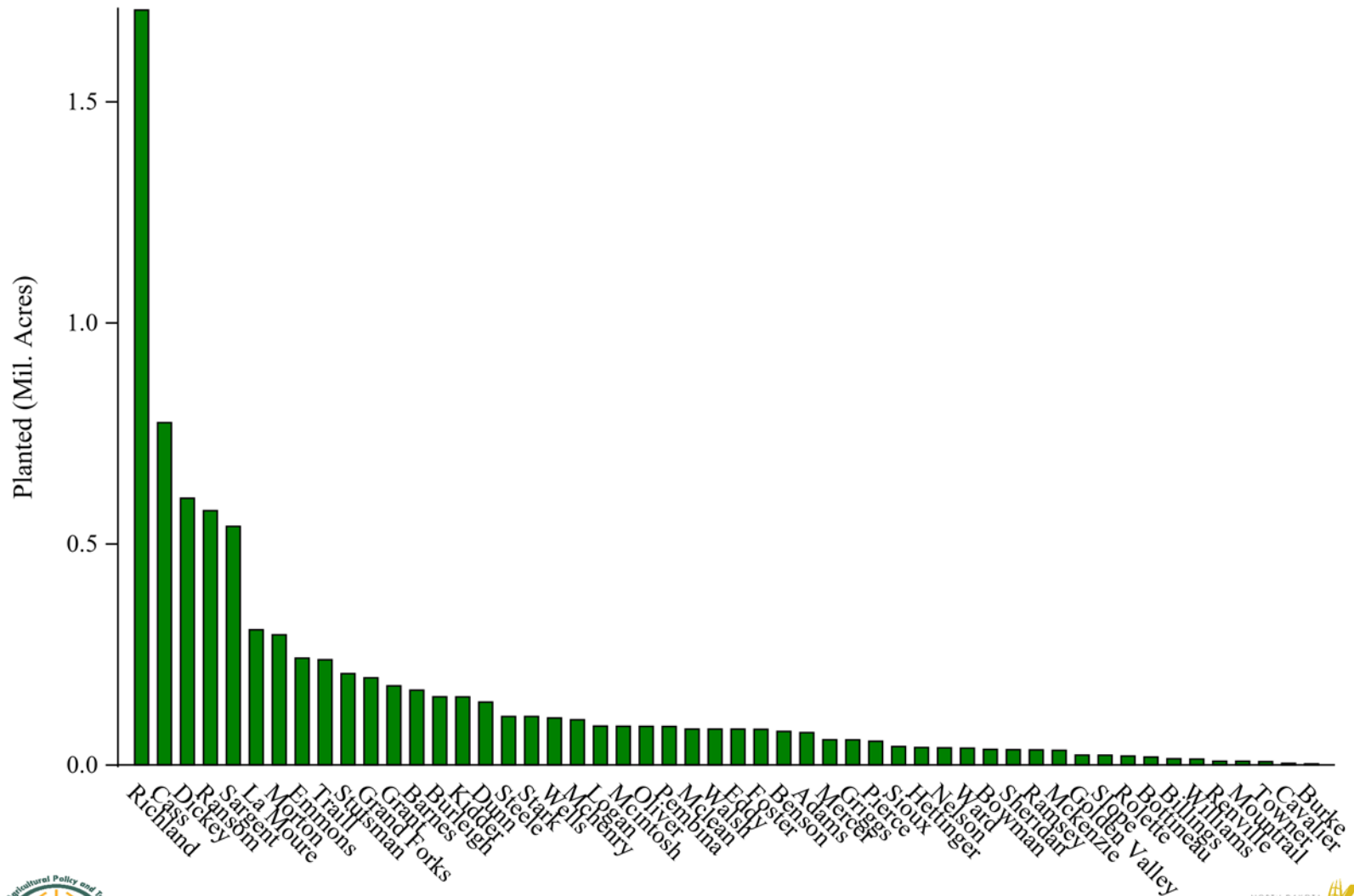
Table 6: North Dakota Counties Planted Acreage, Descriptive Statistics for 1980 to 1989

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	1,542,000	154,200	22,612	14.7	18.2
Cass	10	733,200	73,320	10,029	13.7	8.65
Ransom	10	553,500	55,350	7,828	14.1	6.53
Dickey	10	502,500	50,250	6,116	12.2	5.93
Sargent	10	436,200	43,620	4,863	11.1	5.14
Morton	10	331,500	33,150	3,154	9.5	3.91
La Moure	10	314,500	31,450	4,079	13.0	3.71
Emmons	10	296,400	29,640	3,082	10.4	3.50
Grant	10	248,800	24,880	2,100	8.4	2.93
Stutsman	10	243,400	24,340	3,792	15.6	2.87
Barnes	10	202,700	20,270	3,594	17.7	2.39
Grand Forks	10	190,000	19,000	3,475	18.3	2.24
Burleigh	10	174,000	17,400	2,767	15.9	2.05
Dunn	10	172,100	17,210	2,402	14.0	2.03
Kidder	10	172,000	17,200	2,720	15.8	2.03
Wells	10	152,400	15,240	3,542	23.2	1.80
Mchenry	10	131,300	13,130	2,310	17.6	1.55
Stark	10	128,400	12,840	1,773	13.8	1.51

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Logan	10	120,800	12,080	1,401	11.6	1.42
Mcintosh	10	113,500	11,350	1,350	11.9	1.34
Oliver	10	107,100	10,710	2,609	24.4	1.26
Mercer	10	104,700	10,470	1,899	18.1	1.23
Pembina	10	102,300	10,230	3,724	36.4	1.21
Mclean	10	100,700	10,070	2,439	24.2	1.19
Benson	10	96,500	9,650	2,936	30.4	1.14
Traill	10	92,200	9,220	3,264	35.4	1.09
Adams	10	92,100	9,210	967	10.5	1.09
Walsh	10	89,500	8,950	2,054	22.9	1.06
Foster	10	88,400	8,840	1,036	11.7	1.04
Hettinger	10	82,400	8,240	3,621	43.9	0.97
Steele	10	79,900	7,990	1,986	24.9	0.94
Eddy	10	77,700	7,770	1,438	18.5	0.92
Pierce	10	69,000	6,900	1,049	15.2	0.81
Griggs	10	58,000	5,800	838	14.4	0.68
Sioux	10	57,300	5,730	827	14.4	0.68
Ward	10	48,900	4,890	1,130	23.1	0.58
Sheridan	10	45,100	4,510	823	18.2	0.53

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Nelson	10	44,400	4,440	1,022	23.0	0.52
Mckenzie	10	37,400	3,740	1,104	29.5	0.44
Bowman	10	36,000	3,600	585	16.2	0.42
Slope	10	28,100	2,810	495	17.6	0.33
Bottineau	10	24,700	2,470	742	30.1	0.29
Ramsey	10	22,500	2,250	769	34.2	0.27
Rolette	10	20,100	2,010	649	32.3	0.24
Mountrail	10	19,400	1,940	664	34.2	0.23
Billings	10	16,600	1,660	313	18.9	0.20
Golden Valley	10	15,900	1,590	451	28.4	0.19
Renville	10	15,100	1,510	375	24.9	0.18
Towner	10	14,300	1,430	416	29.1	0.17
Williams	10	13,400	1,340	448	33.4	0.16
Burke	10	8,800	880	253	28.7	0.10
Cavalier	10	7,100	710	300	42.2	0.08
Divide	10	5,200	520	230	44.2	0.06

Figure 7: North Dakota Counties Planted Acreage, 1990 to 1999



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Table 7: North Dakota Counties Planted Acreage, Descriptive Statistics for 1990 to 1999

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	1,707,000	170,700	10,541	6.2	20.5
Cass	10	774,000	77,400	10,501	13.6	9.30
Dickey	10	603,000	60,300	8,260	13.7	7.24
Ransom	10	575,000	57,500	6,553	11.4	6.91
Sargent	10	539,500	53,950	6,139	11.4	6.48
La Moure	10	305,500	30,550	5,193	17.0	3.67
Morton	10	294,200	29,420	4,654	15.8	3.53
Emmons	10	241,500	24,150	4,516	18.7	2.90
Traill	10	237,800	23,780	15,060	63.3	2.86
Stutsman	10	206,400	20,640	3,935	19.1	2.48
Grand Forks	10	197,000	19,700	7,850	39.8	2.37
Grant	10	178,800	17,880	5,496	30.7	2.15
Barnes	10	169,000	16,900	5,301	31.4	2.03
Burleigh	10	154,000	15,400	3,619	23.5	1.85
Kidder	10	153,800	15,380	2,447	15.9	1.85
Dunn	10	142,000	14,200	4,063	28.6	1.71
Steele	10	109,500	10,950	4,386	40.1	1.32
Stark	10	109,500	10,950	2,713	24.8	1.32

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Wells	10	106,100	10,610	3,642	34.3	1.27
Mchenry	10	102,100	10,210	3,692	36.2	1.23
Logan	10	87,700	8,770	2,862	32.6	1.05
Mcintosh	10	87,300	8,730	2,381	27.3	1.05
Oliver	10	87,100	8,710	2,176	25.0	1.05
Pembina	10	86,800	8,680	2,434	28.0	1.04
Walsh	10	81,000	8,100	2,101	25.9	0.97
Mclean	10	81,000	8,100	2,312	28.5	0.97
Eddy	10	80,900	8,090	2,113	26.1	0.97
Foster	10	80,400	8,040	3,083	38.3	0.97
Benson	10	75,700	7,570	1,694	22.4	0.91
Adams	10	73,000	7,300	1,191	16.3	0.88
Mercer	10	56,900	5,690	2,191	38.5	0.68
Griggs	10	56,700	5,670	1,599	28.2	0.68
Pierce	10	53,500	5,350	1,415	26.5	0.64
Sioux	10	41,500	4,150	1,029	24.8	0.50
Hettinger	10	39,400	3,940	1,276	32.4	0.47
Nelson	10	38,600	3,860	1,645	42.6	0.46
Ward	10	37,900	3,790	1,808	47.7	0.46

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Bowman	10	35,000	3,500	1,531	43.7	0.42
Sheridan	10	34,400	3,440	1,707	49.6	0.41
Ramsey	10	33,900	3,390	2,025	59.7	0.41
Mckenzie	10	33,000	3,300	742	22.5	0.40
Golden Valley	10	22,200	2,220	1,445	65.1	0.27
Slope	10	22,000	2,200	936	42.5	0.26
Rolette	10	20,000	2,000	591	29.5	0.24
Bottineau	10	17,700	1,770	831	47.0	0.21
Billings	10	13,900	1,390	482	34.7	0.17
Williams	10	13,200	1,320	418	31.7	0.16
Mountrail	8	8,300	1,038	526	50.7	0.10
Renville	10	8,300	830	245	29.5	0.10
Towner	8	7,400	925	369	39.9	0.09
Cavalier	8	3,600	450	207	46.0	0.04
Burke	4	2,400	600	0	0.0	0.03

Figure 8: North Dakota Counties Planted Acreage, 2000 to 2009

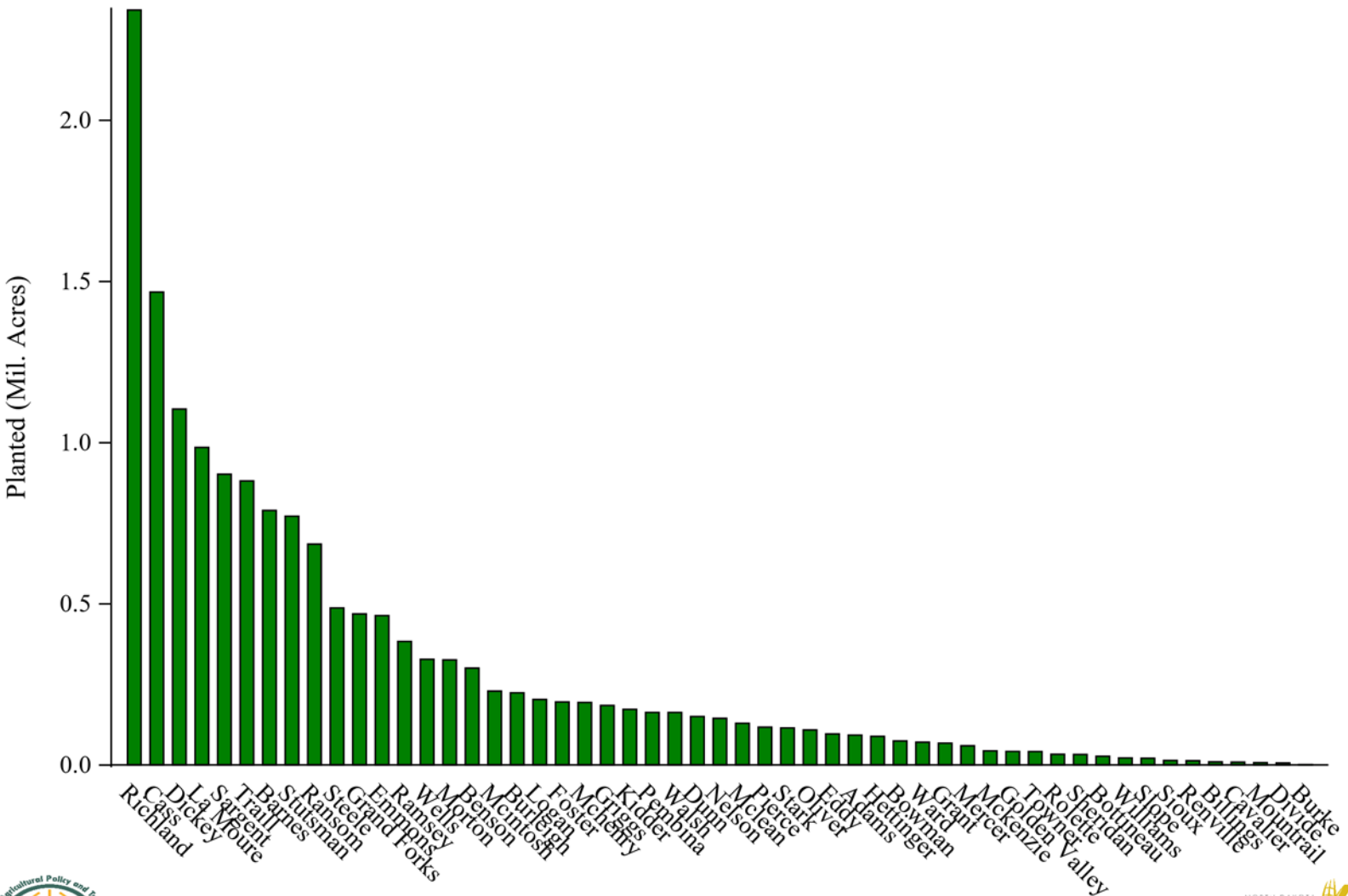


Table 8: North Dakota Counties Planted Acreage, Descriptive Statistics for 2000 to 2009

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	2,342,000	234,200	30,364	13.0	14.6
Cass	10	1,467,000	146,700	72,054	49.1	9.14
Dickey	10	1,104,000	110,400	23,838	21.6	6.88
La Moure	10	985,000	98,500	40,561	41.2	6.14
Sargent	10	902,000	90,200	19,832	22.0	5.62
Traill	10	881,000	88,100	34,472	39.1	5.49
Barnes	10	789,500	78,950	45,773	58.0	4.92
Stutsman	10	771,500	77,150	48,906	63.4	4.81
Ransom	10	685,000	68,500	15,707	22.9	4.27
Steele	10	487,000	48,700	25,836	53.1	3.04
Grand Forks	10	468,500	46,850	23,398	49.9	2.92
Emmons	10	463,300	46,330	14,002	30.2	2.89
Ramsey	10	383,000	38,300	20,267	52.9	2.39
Wells	10	327,700	32,770	20,141	61.5	2.04
Morton	10	325,900	32,590	6,308	19.4	2.03
Benson	10	300,400	30,040	15,242	50.7	1.87
Mcintosh	10	229,000	22,900	5,892	25.7	1.43
Burleigh	9	223,700	24,856	6,633	26.7	1.39

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Logan	10	203,000	20,300	8,798	43.3	1.27
Foster	9	195,200	21,689	13,208	60.9	1.22
Mchenry	9	193,700	21,522	8,265	38.4	1.21
Griggs	10	184,500	18,450	10,508	57.0	1.15
Kidder	9	172,400	19,156	3,183	16.6	1.07
Pembina	9	162,800	18,089	10,630	58.8	1.01
Walsh	9	162,800	18,089	13,410	74.1	1.01
Dunn	10	150,200	15,020	2,347	15.6	0.94
Nelson	9	144,500	16,056	9,498	59.2	0.90
Mclean	9	129,100	14,344	8,295	57.8	0.80
Pierce	9	117,100	13,011	5,144	39.5	0.73
Stark	9	114,800	12,756	3,206	25.1	0.72
Oliver	9	108,500	12,056	3,725	30.9	0.68
Eddy	8	96,100	12,013	4,526	37.7	0.60
Adams	9	92,500	10,278	2,240	21.8	0.58
Hettinger	9	88,600	9,844	3,307	33.6	0.55
Bowman	9	74,400	8,267	1,453	17.6	0.46
Ward	9	70,400	7,822	4,239	54.2	0.44
Grant	4	67,500	16,875	4,073	24.1	0.42

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Mercer	9	59,400	6,600	2,512	38.1	0.37
Mckenzie	9	43,500	4,833	1,256	26.0	0.27
Golden Valley	8	41,800	5,225	1,055	20.2	0.26
Towner	6	41,400	6,900	3,084	44.7	0.26
Rolette	7	32,900	4,700	2,142	45.6	0.21
Sheridan	6	32,400	5,400	3,054	56.6	0.20
Bottineau	6	26,900	4,483	1,237	27.6	0.17
Williams	8	21,500	2,688	992	36.9	0.13
Slope	6	20,700	3,450	734	21.3	0.13
Sioux	3	13,800	4,600	1,493	32.5	0.09
Renville	5	13,000	2,600	1,065	41.0	0.08
Billings	5	9,400	1,880	512	27.2	0.06
Cavalier	6	8,700	1,450	918	63.3	0.05
Mountrail	4	7,200	1,800	1,013	56.3	0.04
Divide	3	6,100	2,033	551	27.1	0.04
Burke	1	800	800	.	.	0.00

Figure 9: North Dakota Counties Planted Acreage, 2010 to 2019

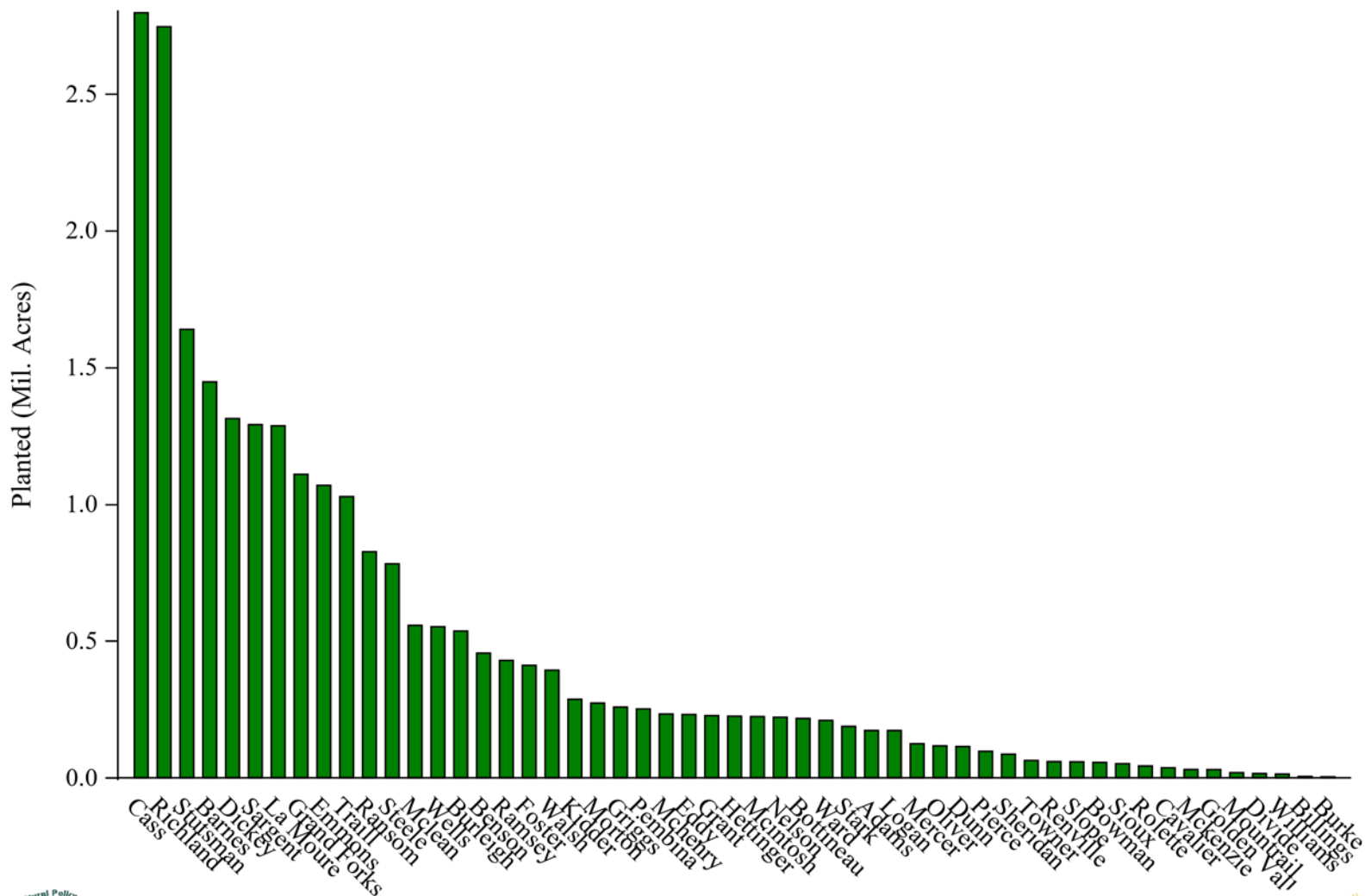


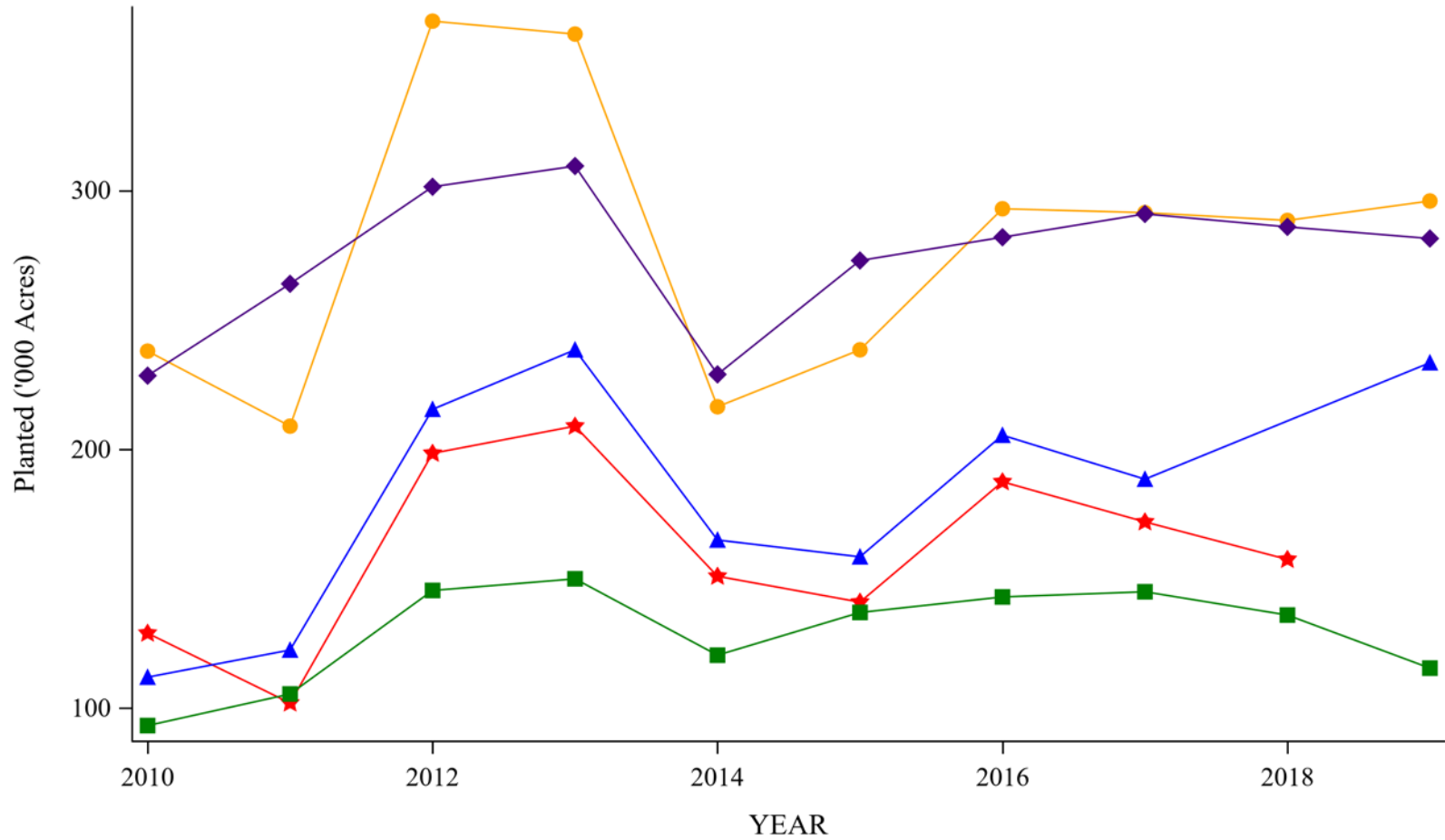
Table 9: North Dakota Counties Planted Acreage, Descriptive Statistics for 2010 to 2019

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Cass	10	2,797,000	279,700	54,751	19.6	11.1
Richland	10	2,746,000	274,600	27,411	10.0	10.9
Stutsman	9	1,639,500	182,167	45,884	25.2	6.53
Barnes	9	1,447,500	160,833	34,552	21.5	5.77
Dickey	8	1,313,500	164,188	28,951	17.6	5.24
Sargent	10	1,291,300	129,130	19,320	15.0	5.15
La Moure	8	1,287,000	160,875	25,710	16.0	5.13
Grand Forks	10	1,109,600	110,960	21,369	19.3	4.42
Emmons	9	1,069,300	118,811	31,657	26.6	4.26
Traill	9	1,028,000	114,222	21,657	19.0	4.10
Ransom	8	826,400	103,300	21,831	21.1	3.29
Steele	9	782,500	86,944	17,516	20.1	3.12
McLean	8	557,300	69,663	21,198	30.4	2.22
Wells	7	552,200	78,886	24,332	30.8	2.20
Burleigh	9	536,600	59,622	21,390	35.9	2.14
Benson	8	455,800	56,975	12,386	21.7	1.82
Ramsey	9	429,000	47,667	12,413	26.0	1.71
Foster	7	411,100	58,729	16,478	28.1	1.64

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Walsh	9	393,400	43,711	14,266	32.6	1.57
Kidder	8	287,000	35,875	11,539	32.2	1.14
Morton	5	273,100	54,620	16,925	31.0	1.09
Griggs	7	258,500	36,929	10,778	29.2	1.03
Pembina	8	251,700	31,463	9,766	31.0	1.00
Mchenry	5	233,100	46,620	19,934	42.8	0.93
Eddy	9	231,300	25,700	7,432	28.9	0.92
Grant	5	227,200	45,440	16,755	36.9	0.91
Hettinger	7	225,100	32,157	10,443	32.5	0.90
Mcintosh	5	223,900	44,780	14,562	32.5	0.89
Nelson	9	221,200	24,578	7,260	29.5	0.88
Bottineau	9	217,000	24,111	13,079	54.2	0.86
Ward	8	209,900	26,238	10,960	41.8	0.84
Stark	7	187,900	26,843	8,813	32.8	0.75
Logan	4	172,900	43,225	16,402	37.9	0.69
Adams	6	172,900	28,817	13,629	47.3	0.69
Mercer	6	124,500	20,750	9,119	43.9	0.50
Oliver	6	116,800	19,467	4,337	22.3	0.47
Dunn	6	114,100	19,017	5,514	29.0	0.45

County	Planted (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Pierce	4	96,800	24,200	8,877	36.7	0.39
Sheridan	5	86,300	17,260	7,991	46.3	0.34
Towner	5	63,300	12,660	6,160	48.7	0.25
Renville	7	59,200	8,457	4,583	54.2	0.24
Slope	6	58,300	9,717	3,856	39.7	0.23
Bowman	4	56,100	14,025	5,463	39.0	0.22
Sioux	4	51,400	12,850	5,272	41.0	0.20
Rolette	6	43,200	7,200	3,320	46.1	0.17
Cavalier	6	36,600	6,100	3,804	62.4	0.15
Mckenzie	5	30,300	6,060	1,579	26.1	0.12
Golden Valley	5	29,900	5,980	2,707	45.3	0.12
Mountrail	5	18,700	3,740	1,946	52.0	0.07
Divide	4	15,600	3,900	2,467	63.3	0.06
Williams	3	13,700	4,567	929	20.3	0.05
Billings	3	4,900	1,633	551	33.7	0.02
Burke	2	3,400	1,700	283	16.6	0.01

Figure 10: Top 5 North Dakota Counties Planted Acreage, Annual Trends



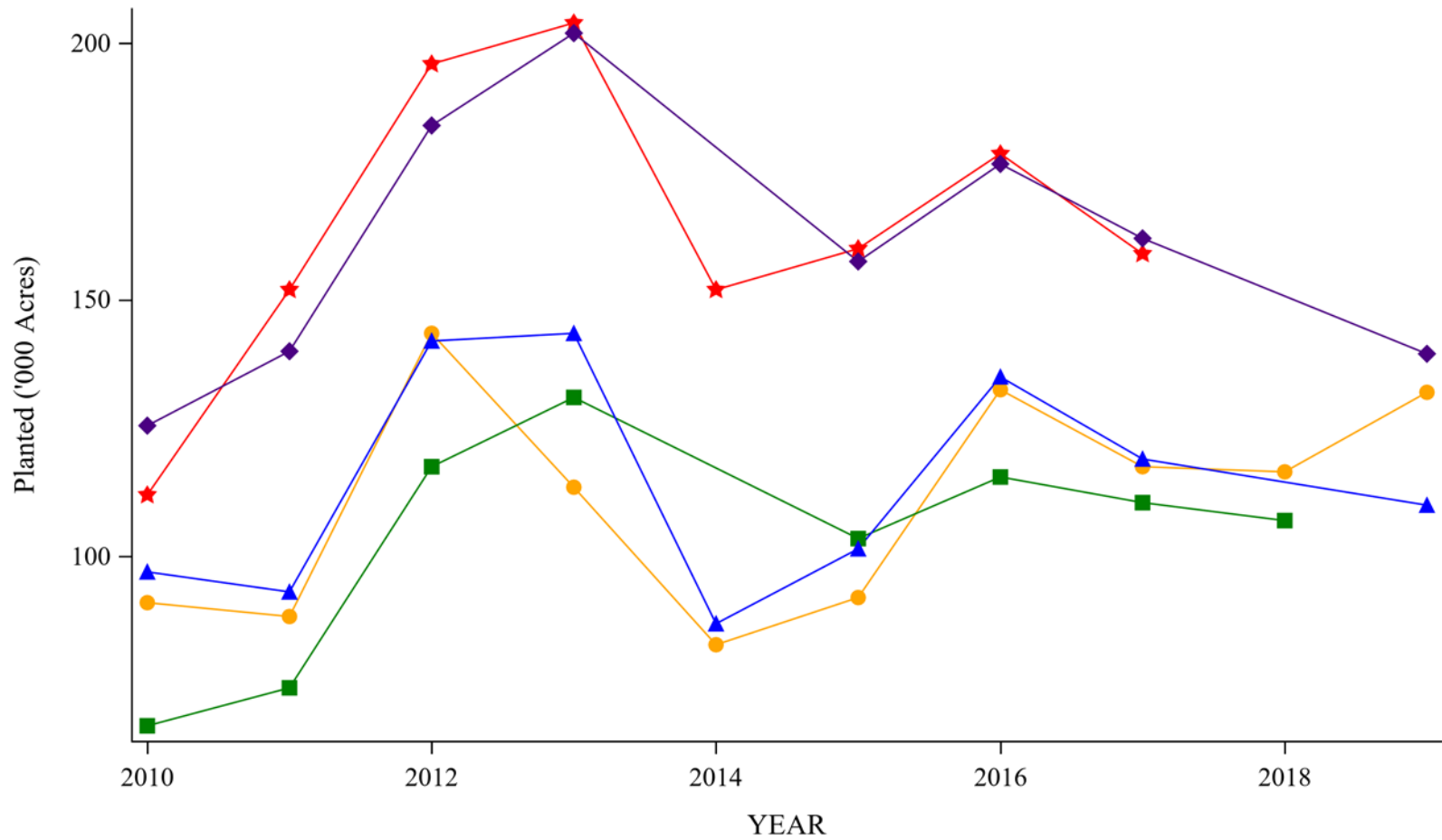
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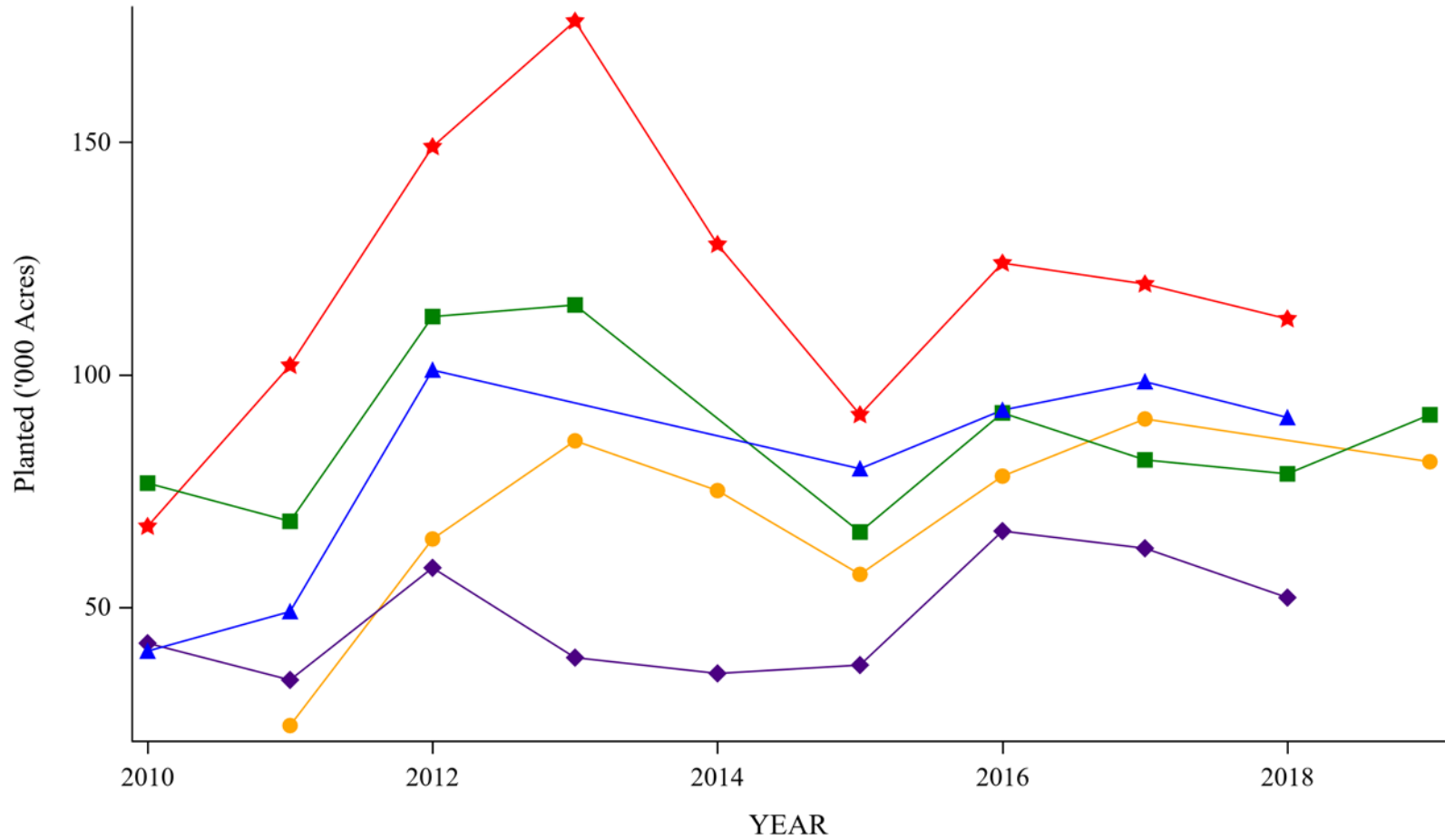
Figure 11: Top 6 to 10 North Dakota Counties Planted Acreage, Annual Trends



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Figure 12: Top 11 to 15 North Dakota Counties Planted Acreage, Annual Trends



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Table 10: Top 15 North Dakota Counties Planted Acreage, Annual Trends

County	Planted (Acres)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	228,500	264,000	301,500	309,500	229,000	273,000	282,000	291,000	286,000	281,500
Cass	238,000	209,000	365,500	360,500	216,500	238,500	293,000	291,500	288,500	296,000
Stutsman	112,000	122,500	215,500	238,500	165,000	158,500	205,500	188,500	.	233,500
Sargent	93,300	105,500	145,500	150,000	120,500	137,000	143,000	145,000	136,000	115,500
Barnes	129,000	102,000	198,500	209,000	151,000	141,000	187,500	172,000	157,500	.
Dickey	112,000	152,000	196,000	204,000	152,000	160,000	178,500	159,000	.	.
La Moure	125,500	140,000	184,000	202,000	.	157,500	176,500	162,000	.	139,500
Grand Forks	91,000	88,300	143,500	113,500	82,800	92,000	132,500	117,500	116,500	132,000
Traill	97,000	93,100	142,000	143,500	86,900	101,500	135,000	119,000	.	110,000
Ransom	67,000	74,400	117,500	131,000	.	103,500	115,500	110,500	107,000	.
Steele	76,700	68,500	112,500	115,000	.	66,200	91,800	81,700	78,700	91,400
Emmons	67,400	102,000	149,000	176,000	128,000	91,400	124,000	119,500	112,000	.
Wells	40,600	49,100	101,000	.	.	79,800	92,400	98,500	90,800	.
Mclean	.	24,600	64,700	85,800	75,100	57,100	78,200	90,500	.	81,300
Ramsey	42,300	34,400	58,500	39,200	35,800	37,600	66,400	62,700	52,100	.
Foster	33,400	38,400	62,800	.	62,500	.	73,400	64,800	.	75,800
Benson	36,000	45,900	75,800	65,800	56,100	.	61,400	62,800	52,000	.
Burleigh	25,000	35,700	65,000	80,800	54,900	45,000	.	75,500	65,200	89,500
Walsh	32,000	32,400	60,500	57,700	26,100	28,600	56,600	57,100	42,400	.
Griggs	24,300	24,400	43,500	53,000	.	30,800	42,700	39,800	.	.
Pembina	18,000	21,800	37,100	.	27,800	27,600	45,500	43,100	30,800	.
Eddy	11,600	14,900	30,000	31,200	26,900	25,100	30,600	32,200	28,800	.
Kidder	19,300	24,700	44,400	55,200	38,200	31,000	31,900	.	.	42,300
Nelson	15,000	15,200	29,000	30,600	21,200	19,700	35,500	30,200	24,800	.
Bottineau	5,100	5,700	28,600	38,600	16,500	20,200	37,700	37,100	27,500	.
Mcintosh	21,700	42,800	61,300	.	48,000	.	50,100	.	.	.
Ward	.	5,800	27,600	.	21,700	18,000	34,300	32,900	28,600	41,000
Morton	35,300	45,300	80,200	.	.	52,500	59,800	.	.	.
Mchenry	28,000	24,300	63,200	.	.	49,500	68,100	.	.	.
Hettinger	.	14,400	29,600	43,800	31,400	.	28,600	45,700	.	31,600
Grant	23,600	31,500	53,300	.	.	.	59,500	59,300	.	.
Logan	28,000	42,300	66,200	.	.	.	36,400	.	.	.
Stark	14,400	14,300	28,900	36,200	.	31,300	30,800	32,000	.	.

County	Planted (Acres)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oliver	15,000	13,700	24,600	22,100	.	19,200	22,200	.	.	.
Mercer	9,000	9,700	29,900	27,000	.	.	22,800	.	26,100	.
Adams	.	10,400	25,200	26,100	22,900	.	38,500	.	49,800	.
Sheridan	8,100	9,400	23,300	.	.	.	20,200	.	.	25,300
Pierce	16,000	19,500	36,300	.	.	25,000	.	.	.	.
Towner	4,500	.	12,700	.	11,400	12,900	.	21,800	.	.
Dunn	14,000	10,200	.	22,500	22,600	.	21,600	.	23,200	.
Renville	1,900	.	6,000	11,000	7,200	5,400	13,000	14,700	.	.
Sioux	6,700	10,500	18,500	15,700	.	.	.	.	.	.
Cavalier	1,200	.	5,700	.	4,900	4,600	.	12,600	.	7,600
Slope	2,800	.	11,000	.	.	9,500	9,700	10,700	.	14,600
Rolette	3,900	3,600	7,100	.	6,400	.	.	10,800	.	11,400
Bowman	8,700	11,100	15,100	.	.	.	.	.	21,200	.
Golden Valley	4,500	2,200	.	.	.	6,200	8,300	8,700	.	.
Mountrail	.	800	.	.	4,200	2,900	.	.	5,200	5,600
Mckenzie	.	3,300	.	7,100	6,900	.	6,200	.	.	6,800
Divide	1,600	.	3,300	7,400	.	.	3,300	.	.	.
Williams	.	.	4,300	.	5,600	3,800
Billings	1,000	.	.	.	2,000	1,900
Burke	1,900	.	1,500	.

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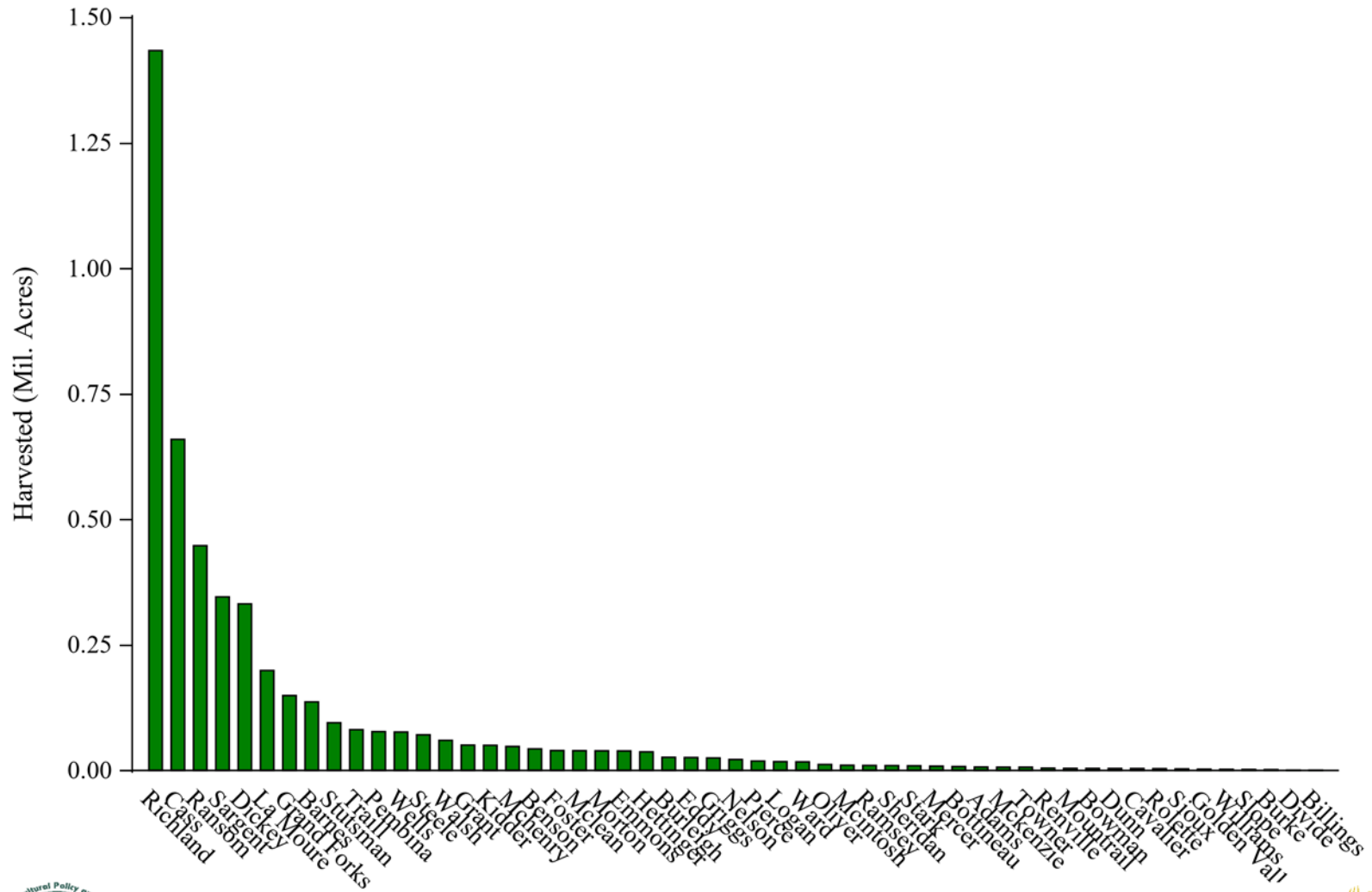
Table 11: Top 15 North Dakota Counties Share based on Planted Acreage, Annual Trends

County	Share(percentages)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	11.48	11.93	8.36	9.95	11.64	11.55	8.67	10.03	15.44	15.35
Cass	11.96	9.44	10.14	11.59	11.00	10.09	9.01	10.05	15.58	16.14
Stutsman	5.63	5.53	5.98	7.67	8.38	6.71	6.32	6.50	.	12.73
Sargent	4.69	4.77	4.04	4.82	6.12	5.80	4.40	5.00	7.34	6.30
Barnes	6.48	4.61	5.51	6.72	7.67	5.97	5.76	5.93	8.50	.
Dickey	5.63	6.87	5.44	6.56	7.72	6.77	5.49	5.48	.	.
La Moure	6.31	6.32	5.10	6.50	.	6.66	5.43	5.58	.	7.61
Grand Forks	4.57	3.99	3.98	3.65	4.21	3.89	4.07	4.05	6.29	7.20
Traill	4.87	4.21	3.94	4.62	4.42	4.29	4.15	4.10	.	6.00
Ransom	3.37	3.36	3.26	4.21	.	4.38	3.55	3.81	5.78	.
Steele	3.85	3.09	3.12	3.70	.	2.80	2.82	2.82	4.25	4.98
Emmons	3.39	4.61	4.13	5.66	6.50	3.87	3.81	4.12	6.05	.
Wells	2.04	2.22	2.80	.	.	3.38	2.84	3.40	4.90	.
McLean	.	1.11	1.79	2.76	3.82	2.42	2.40	3.12	.	4.43
Ramsey	2.13	1.55	1.62	1.26	1.82	1.59	2.04	2.16	2.81	.
Foster	1.68	1.73	1.74	.	3.18	.	2.26	2.23	.	4.13
Benson	1.81	2.07	2.10	2.12	2.85	.	1.89	2.16	2.81	.
Burleigh	1.26	1.61	1.80	2.60	2.79	1.90	.	2.60	3.52	4.88
Walsh	1.61	1.46	1.68	1.86	1.33	1.21	1.74	1.97	2.29	.
Griggs	1.22	1.10	1.21	1.70	.	1.30	1.31	1.37	.	.
Pembina	0.90	0.98	1.03	.	1.41	1.17	1.40	1.49	1.66	.
Eddy	0.58	0.67	0.83	1.00	1.37	1.06	0.94	1.11	1.55	.
Kidder	0.97	1.12	1.23	1.78	1.94	1.31	0.98	.	.	2.31
Nelson	0.75	0.69	0.80	0.98	1.08	0.83	1.09	1.04	1.34	.
Bottineau	0.26	0.26	0.79	1.24	0.84	0.85	1.16	1.28	1.48	.
McIntosh	1.09	1.93	1.70	.	2.44	.	1.54	.	.	.
Ward	.	0.26	0.77	.	1.10	0.76	1.05	1.13	1.54	2.24
Morton	1.77	2.05	2.22	.	.	2.22	1.84	.	.	.
Mchenry	1.41	1.10	1.75	.	.	2.09	2.09	.	.	.
Hettinger	.	0.65	0.82	1.41	1.60	.	0.88	1.58	.	1.72
Grant	1.19	1.42	1.48	.	.	.	1.83	2.04	.	.
Logan	1.41	1.91	1.84	.	.	.	1.12	.	.	.
Stark	0.72	0.65	0.80	1.16	.	1.32	0.95	1.10	.	.

County	Share(percentages)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oliver	0.75	0.62	0.68	0.71	.	0.81	0.68	.	.	.
Mercer	0.45	0.44	0.83	0.87	.	.	0.70	.	1.41	.
Adams	.	0.47	0.70	0.84	1.16	.	1.18	.	2.69	.
Sheridan	0.41	0.42	0.65	.	.	.	0.62	.	.	1.38
Pierce	0.80	0.88	1.01	.	.	1.06	.	.	.	.
Towner	0.23	.	0.35	.	0.58	0.55	.	0.75	.	.
Dunn	0.70	0.46	.	0.72	1.15	.	0.66	.	1.25	.
Renville	0.10	.	0.17	0.35	0.37	0.23	0.40	0.51	.	.
Sioux	0.34	0.47	0.51	0.50	.	.	.	.	.	.
Cavalier	0.06	.	0.16	.	0.25	0.19	.	0.43	.	0.41
Slope	0.14	.	0.31	.	.	0.40	0.30	0.37	.	0.80
Rolette	0.20	0.16	0.20	.	0.33	.	.	0.37	.	0.62
Bowman	0.44	0.50	0.42	.	.	.	.	.	1.14	.
Golden Valley	0.23	0.10	.	.	.	0.26	0.26	0.30	.	.
Mountrail	.	0.04	.	.	0.21	0.12	.	.	0.28	0.31
Mckenzie	.	0.15	.	0.23	0.35	.	0.19	.	.	0.37
Divide	0.08	.	0.09	0.24	.	.	0.10	.	.	.
Williams	.	.	0.12	.	0.28	0.16
Billings	0.05	.	.	.	0.10	0.10
Burke	0.06	.	0.08	.

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Figure 13: North Dakota Counties Harvested Acreage, 1980 to 1989



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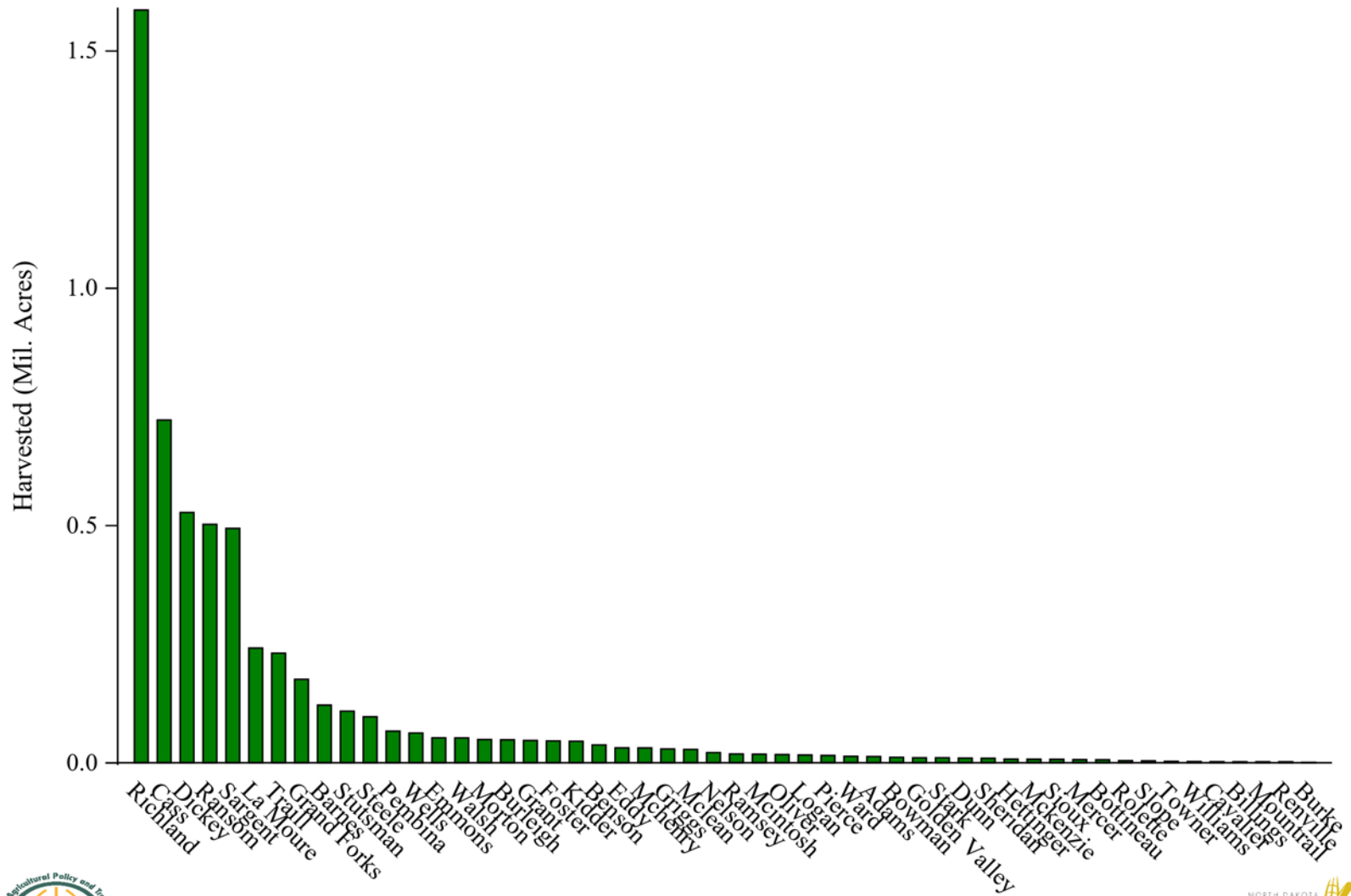
Table 12: North Dakota Counties Harvested Acreage, Descriptive Statistics for 1980 to 1989

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	1,434,100	143,410	23,409	16.3	29.7
Cass	10	659,500	65,950	10,900	16.5	13.7
Ransom	10	447,700	44,770	8,738	19.5	9.28
Sargent	10	345,700	34,570	6,291	18.2	7.17
Dickey	10	331,800	33,180	9,259	27.9	6.88
La Moure	10	199,100	19,910	7,117	35.7	4.13
Grand Forks	10	149,200	14,920	4,830	32.4	3.09
Barnes	10	136,500	13,650	4,516	33.1	2.83
Stutsman	10	94,900	9,490	4,248	44.8	1.97
Traill	10	81,200	8,120	3,434	42.3	1.68
Pembina	10	77,200	7,720	3,840	49.7	1.60
Wells	10	76,400	7,640	4,358	57.0	1.58
Steele	10	70,900	7,090	2,155	30.4	1.47
Walsh	10	59,900	5,990	2,071	34.6	1.24
Grant	10	50,500	5,050	3,168	62.7	1.05
Kidder	10	50,000	5,000	1,582	31.6	1.04
Mchenry	10	47,700	4,770	2,803	58.8	0.99
Benson	10	42,900	4,290	2,741	63.9	0.89

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Foster	10	39,600	3,960	1,582	39.9	0.82
Mclean	10	39,300	3,930	2,603	66.2	0.81
Morton	10	39,000	3,900	3,191	81.8	0.81
Emmons	10	38,800	3,880	2,577	66.4	0.80
Hettinger	8	36,900	4,613	3,587	77.8	0.77
Burleigh	10	26,200	2,620	1,569	59.9	0.54
Eddy	10	25,700	2,570	1,087	42.3	0.53
Griggs	10	24,800	2,480	485	19.6	0.51
Nelson	10	21,700	2,170	1,258	58.0	0.45
Pierce	10	18,600	1,860	1,362	73.2	0.39
Logan	10	17,500	1,750	1,036	59.2	0.36
Ward	10	17,000	1,700	1,190	70.0	0.35
Oliver	10	11,900	1,190	1,343	113	0.25
Mcintosh	9	10,300	1,144	886	77.4	0.21
Ramsey	9	9,900	1,100	466	42.4	0.21
Sheridan	9	9,600	1,067	602	56.4	0.20
Stark	8	9,200	1,150	1,225	106	0.19
Mercer	8	8,500	1,063	1,209	114	0.18
Bottineau	10	7,700	770	419	54.4	0.16

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Adams	7	6,700	957	637	66.6	0.14
Mckenzie	10	6,400	640	513	80.1	0.13
Towner	10	6,400	640	334	52.2	0.13
Renville	9	4,600	511	220	43.1	0.10
Mountrail	8	4,100	513	416	81.1	0.09
Bowman	6	4,000	667	432	64.8	0.08
Dunn	8	3,900	488	376	77.1	0.08
Cavalier	8	3,800	475	249	52.5	0.08
Rolette	7	3,500	500	245	49.0	0.07
Sioux	7	3,100	443	310	70.0	0.06
Golden Valley	8	2,500	313	181	57.8	0.05
Williams	8	2,200	275	139	50.5	0.05
Slope	6	1,900	317	133	42.0	0.04
Burke	4	1,600	400	115	28.9	0.03
Divide	4	500	125	50	40.0	0.01
Billings	2	400	200	141	70.7	0.01

Figure 14: North Dakota Counties Harvested Acreage, 1990 to 1999



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Table 13: North Dakota Counties Harvested Acreage, Descriptive Statistics for 1990 to 1999

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	1,585,600	158,560	19,611	12.4	27.9
Cass	10	721,900	72,190	12,174	16.9	12.7
Dickey	10	527,200	52,720	7,798	14.8	9.29
Ransom	10	502,200	50,220	6,447	12.8	8.85
Sargent	10	493,600	49,360	7,505	15.2	8.70
La Moure	10	241,600	24,160	4,991	20.7	4.26
Traill	10	230,800	23,080	15,064	65.3	4.07
Grand Forks	10	175,700	17,570	8,421	47.9	3.10
Barnes	10	121,400	12,140	6,584	54.2	2.14
Stutsman	10	108,600	10,860	4,530	41.7	1.91
Steele	10	96,800	9,680	4,835	50.0	1.71
Pembina	10	66,600	6,660	3,082	46.3	1.17
Wells	10	62,600	6,260	2,377	38.0	1.10
Emmons	10	52,500	5,250	2,675	50.9	0.93
Walsh	10	52,300	5,230	2,799	53.5	0.92
Morton	10	48,800	4,880	2,835	58.1	0.86
Burleigh	10	48,300	4,830	3,017	62.5	0.85
Grant	10	46,900	4,690	2,992	63.8	0.83

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Foster	10	45,900	4,590	1,968	42.9	0.81
Kidder	10	45,200	4,520	2,064	45.7	0.80
Benson	10	37,500	3,750	2,292	61.1	0.66
Eddy	10	31,300	3,130	1,641	52.4	0.55
Mchenry	10	31,200	3,120	1,905	61.1	0.55
Griggs	10	29,000	2,900	1,926	66.4	0.51
Mclean	10	28,000	2,800	1,102	39.3	0.49
Nelson	10	21,400	2,140	2,115	98.8	0.38
Ramsey	9	18,500	2,056	2,721	132	0.33
Mcintosh	9	18,000	2,000	1,530	76.5	0.32
Oliver	9	17,200	1,911	1,419	74.3	0.30
Logan	9	16,300	1,811	701	38.7	0.29
Pierce	9	15,300	1,700	716	42.1	0.27
Ward	10	13,500	1,350	871	64.5	0.24
Adams	9	13,000	1,444	1,584	110	0.23
Bowman	6	11,400	1,900	2,118	111	0.20
Golden Valley	9	10,400	1,156	1,425	123	0.18
Stark	8	10,400	1,300	1,060	81.5	0.18
Dunn	8	9,700	1,213	1,311	108	0.17

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Sheridan	10	9,400	940	670	71.3	0.17
Hettinger	9	7,600	844	837	99.1	0.13
Mckenzie	8	7,400	925	623	67.3	0.13
Sioux	8	7,200	900	791	87.9	0.13
Mercer	9	6,500	722	740	102	0.11
Bottineau	10	6,200	620	319	51.5	0.11
Rolette	8	4,500	563	447	79.5	0.08
Slope	5	4,000	800	636	79.5	0.07
Towner	7	2,900	414	418	101	0.05
Williams	9	2,500	278	211	75.9	0.04
Cavalier	7	2,200	314	168	53.3	0.04
Billings	5	2,000	400	200	50.0	0.04
Mountrail	6	2,000	333	175	52.5	0.04
Renville	6	2,000	333	207	62.0	0.04
Burke	3	700	233	115	49.5	0.01

Figure 15: North Dakota Counties Harvested Acreage, 2000 to 2009

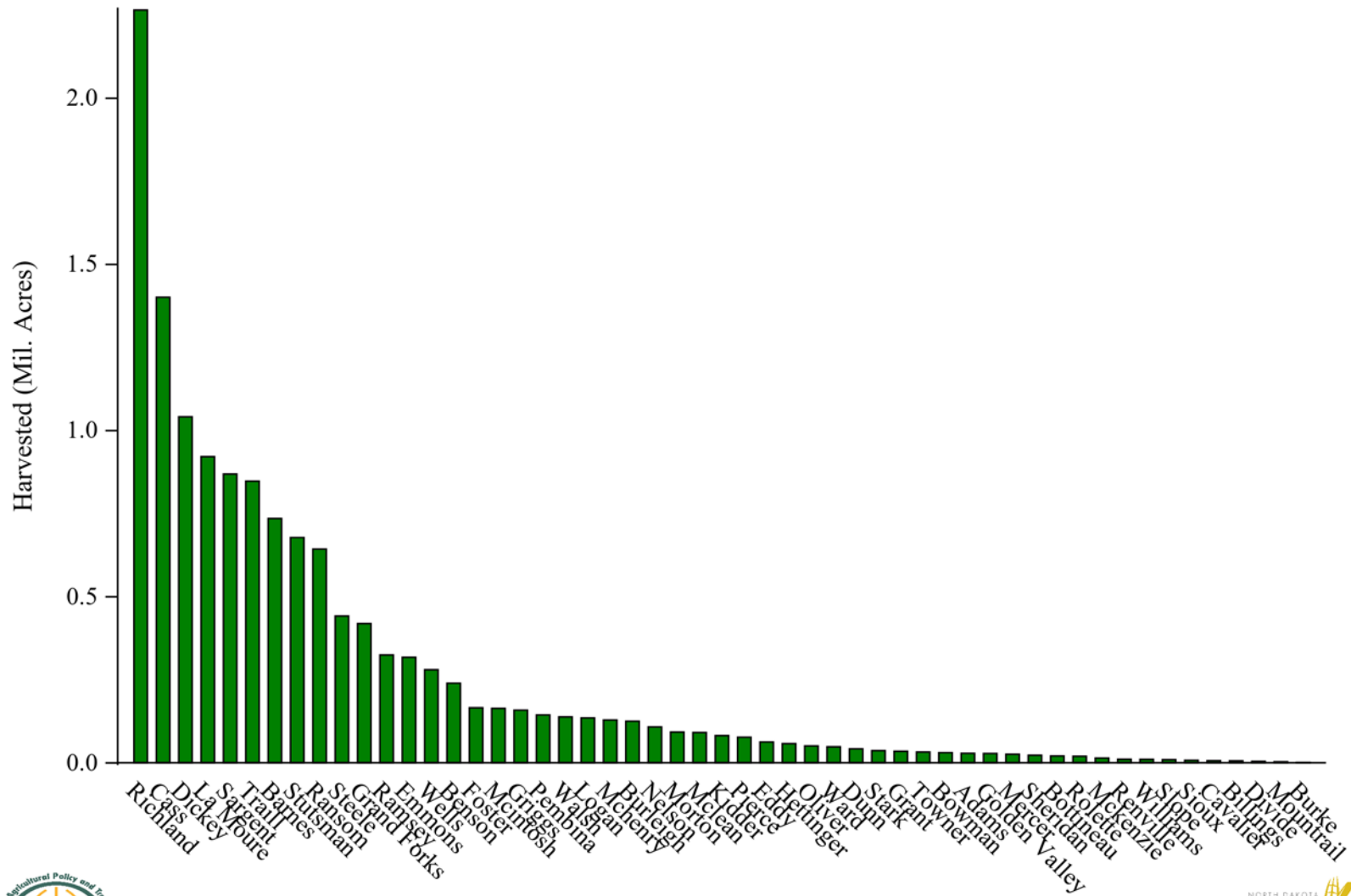


Table 14: North Dakota Counties Harvested Acreage, Descriptive Statistics for 2000 to 2009

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	2,264,300	226,430	30,567	13.5	16.6
Cass	10	1,400,400	140,040	70,599	50.4	10.3
Dickey	10	1,040,700	104,070	23,117	22.2	7.63
La Moure	10	920,900	92,090	40,026	43.5	6.75
Sargent	10	868,500	86,850	19,840	22.8	6.37
Traill	10	847,000	84,700	34,096	40.3	6.21
Barnes	10	734,900	73,490	45,373	61.7	5.39
Stutsman	10	677,400	67,740	47,929	70.8	4.97
Ransom	10	642,700	64,270	14,233	22.1	4.71
Steele	10	441,300	44,130	26,234	59.4	3.24
Grand Forks	10	418,600	41,860	25,002	59.7	3.07
Ramsey	10	324,100	32,410	22,444	69.3	2.38
Emmons	10	317,300	31,730	16,638	52.4	2.33
Wells	10	279,900	27,990	20,584	73.5	2.05
Benson	10	239,200	23,920	16,687	69.8	1.75
Foster	9	165,400	18,378	13,662	74.3	1.21
Mcintosh	10	163,600	16,360	5,380	32.9	1.20
Griggs	10	158,200	15,820	10,649	67.3	1.16

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Pembina	9	143,900	15,989	11,627	72.7	1.06
Walsh	9	137,800	15,311	13,546	88.5	1.01
Logan	10	134,800	13,480	8,885	65.9	0.99
Mchenry	9	128,600	14,289	7,651	53.5	0.94
Burleigh	9	124,900	13,878	6,844	49.3	0.92
Nelson	9	107,800	11,978	10,238	85.5	0.79
Morton	10	92,200	9,220	6,753	73.2	0.68
Mclean	9	90,800	10,089	8,670	85.9	0.67
Kidder	9	81,700	9,078	3,121	34.4	0.60
Pierce	9	76,800	8,533	4,545	53.3	0.56
Eddy	8	62,400	7,800	5,578	71.5	0.46
Hettinger	9	57,400	6,378	4,110	64.4	0.42
Oliver	9	50,600	5,622	3,864	68.7	0.37
Ward	9	48,000	5,333	4,055	76.0	0.35
Dunn	10	41,800	4,180	2,749	65.8	0.31
Stark	9	36,400	4,044	2,888	71.4	0.27
Grant	4	34,500	8,625	5,719	66.3	0.25
Towner	6	32,200	5,367	3,590	66.9	0.24
Bowman	9	30,400	3,378	1,985	58.8	0.22

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Adams	9	28,400	3,156	1,450	46.0	0.21
Golden Valley	8	27,900	3,488	1,237	35.5	0.20
Mercer	9	25,600	2,844	2,196	77.2	0.19
Sheridan	6	22,600	3,767	2,759	73.2	0.17
Bottineau	6	20,300	3,383	1,036	30.6	0.15
Rolette	7	19,500	2,786	1,979	71.0	0.14
Mckenzie	9	14,100	1,567	953	60.8	0.10
Renville	5	10,500	2,100	1,098	52.3	0.08
Williams	8	10,200	1,275	843	66.1	0.07
Slope	6	9,200	1,533	476	31.0	0.07
Sioux	3	7,500	2,500	1,510	60.4	0.06
Cavalier	6	6,400	1,067	1,089	102	0.05
Billings	5	5,800	1,160	416	35.9	0.04
Divide	3	4,200	1,400	400	28.6	0.03
Mountrail	4	2,900	725	435	60.0	0.02
Burke	1	700	700	.	.	0.01

Figure 16: North Dakota Counties Harvested Acreage, 2010 to 2019

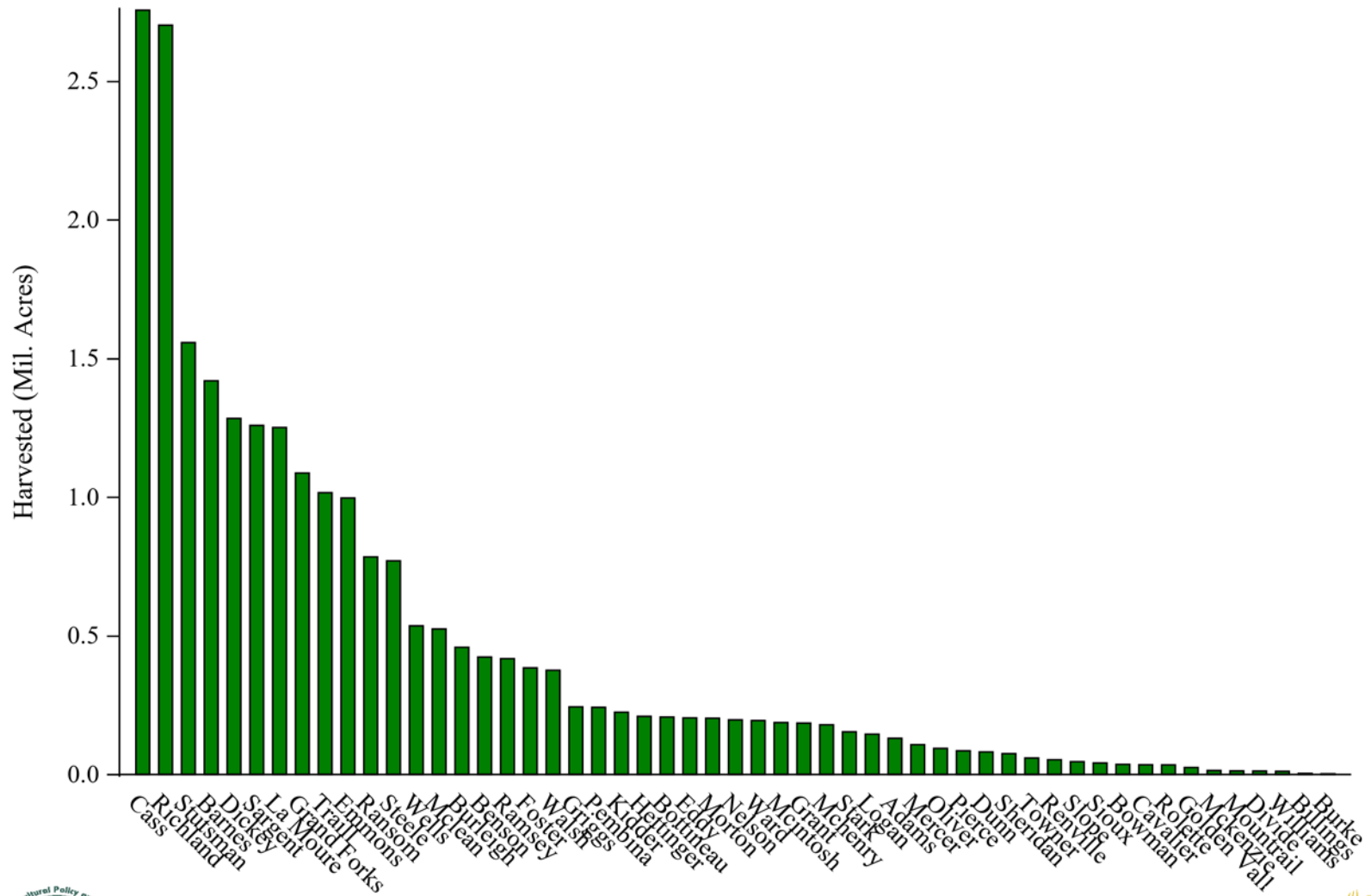


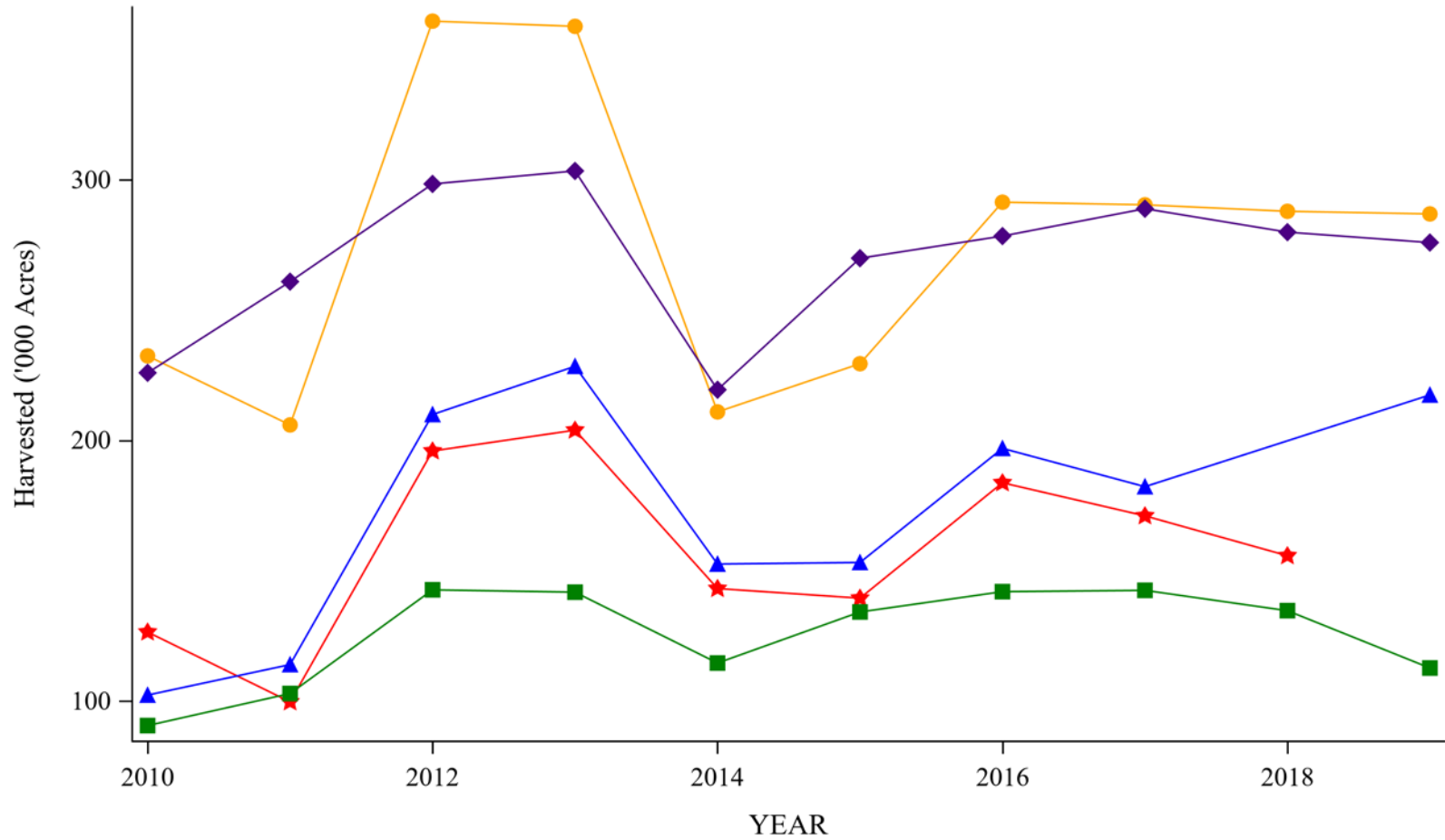
Table 15: North Dakota Counties Harvested Acreage, Descriptive Statistics for 2010 to 2019

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Cass	10	2,756,000	275,600	55,785	20.2	11.6
Richland	10	2,702,000	270,200	28,029	10.4	11.4
Stutsman	9	1,557,400	173,044	45,249	26.1	6.56
Barnes	9	1,419,600	157,733	34,194	21.7	5.98
Dickey	8	1,283,800	160,475	29,246	18.2	5.41
Sargent	10	1,258,700	125,870	19,129	15.2	5.30
La Moure	8	1,251,200	156,400	26,962	17.2	5.27
Grand Forks	10	1,086,900	108,690	22,966	21.1	4.58
Traill	9	1,016,100	112,900	21,557	19.1	4.28
Emmons	9	997,000	110,778	30,484	27.5	4.20
Ransom	8	784,500	98,063	20,903	21.3	3.30
Steele	9	770,300	85,589	17,507	20.5	3.24
Wells	7	535,900	76,557	24,300	31.7	2.26
McLean	8	524,700	65,588	20,976	32.0	2.21
Burleigh	9	458,500	50,944	20,465	40.2	1.93
Benson	8	423,400	52,925	12,506	23.6	1.78
Ramsey	9	417,700	46,411	13,062	28.1	1.76
Foster	7	384,400	54,914	15,417	28.1	1.62

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Walsh	9	375,800	41,756	14,566	34.9	1.58
Griggs	7	243,700	34,814	10,426	29.9	1.03
Pembina	8	242,200	30,275	9,933	32.8	1.02
Kidder	8	224,400	28,050	10,525	37.5	0.95
Hettinger	7	209,500	29,929	10,301	34.4	0.88
Bottineau	9	207,100	23,011	13,170	57.2	0.87
Eddy	9	204,000	22,667	6,804	30.0	0.86
Morton	5	202,900	40,580	15,216	37.5	0.85
Nelson	9	196,900	21,878	8,578	39.2	0.83
Ward	8	194,460	24,308	10,576	43.5	0.82
Mcintosh	5	187,200	37,440	13,267	35.4	0.79
Grant	5	185,200	37,040	14,297	38.6	0.78
Mchenry	5	179,200	35,840	19,401	54.1	0.75
Stark	7	153,700	21,957	8,613	39.2	0.65
Logan	4	145,200	36,300	14,999	41.3	0.61
Adams	6	130,500	21,750	9,089	41.8	0.55
Mercer	6	107,500	17,917	8,639	48.2	0.45
Oliver	6	94,000	15,667	3,722	23.8	0.40
Pierce	4	85,300	21,325	9,359	43.9	0.36

County	Harvested (Acres)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Dunn	6	81,200	13,533	5,233	38.7	0.34
Sheridan	5	75,100	15,020	7,989	53.2	0.32
Towner	5	59,400	11,880	6,175	52.0	0.25
Renville	7	53,000	7,571	4,621	61.0	0.22
Slope	6	46,020	7,670	4,044	52.7	0.19
Sioux	4	41,400	10,350	4,119	39.8	0.17
Bowman	4	36,400	9,100	4,201	46.2	0.15
Cavalier	6	34,900	5,817	3,699	63.6	0.15
Rolette	6	34,500	5,750	3,551	61.8	0.15
Golden Valley	5	25,070	5,014	2,010	40.1	0.11
Mckenzie	5	14,300	2,860	1,346	47.1	0.06
Mountrail	5	12,750	2,550	1,359	53.3	0.05
Divide	4	12,280	3,070	2,504	81.6	0.05
Williams	3	11,220	3,740	641	17.1	0.05
Billings	3	3,850	1,283	679	52.9	0.02
Burke	2	2,400	1,200	453	37.7	0.01

Figure 17: Top 5 North Dakota Counties Harvested Acreage, Annual Trends



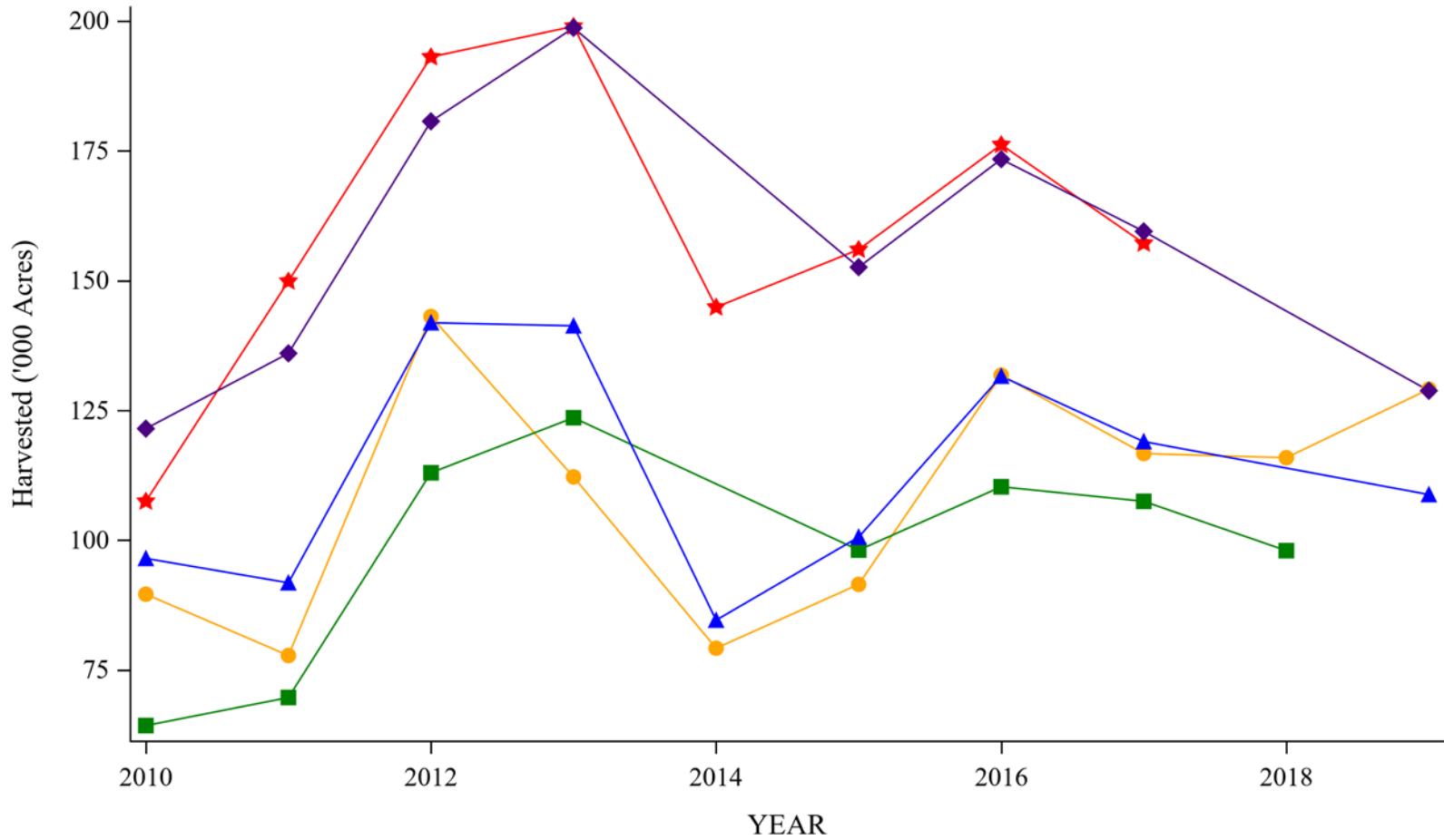
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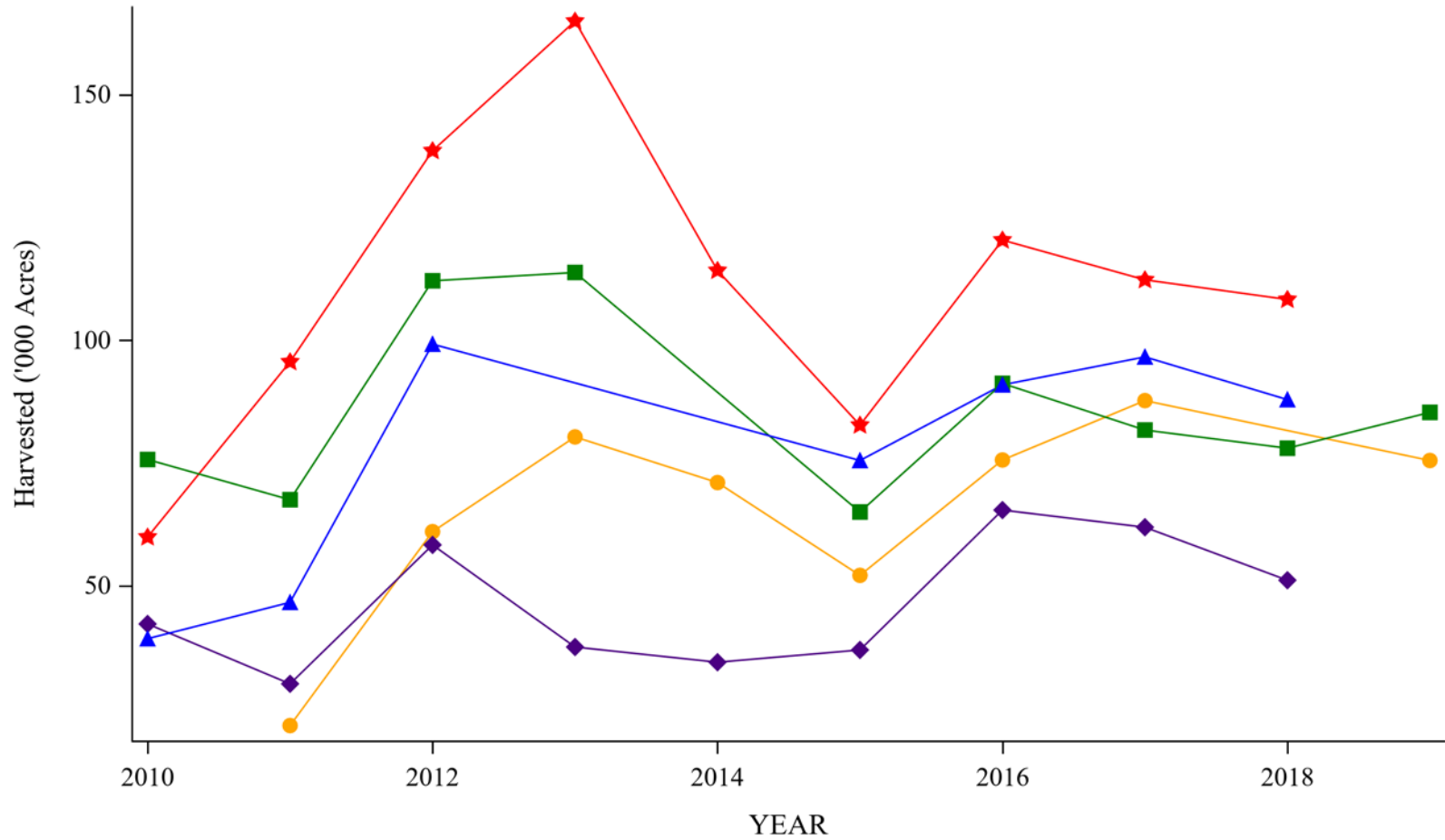
Figure 18: Top 6 to 10 North Dakota Counties Harvested Acreage, Annual Trends



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Figure 19: Top 11 to 15 North Dakota Counties Harvested Acreage, Annual Trends



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Table 16: Top 15 North Dakota Counties Harvested Acreage, Annual Trends

County	Harvested (Acres)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	226,000	261,000	298,500	303,500	219,500	270,000	278,500	289,000	280,000	276,000
Cass	232,500	206,000	361,000	359,000	211,000	229,500	291,500	290,500	288,000	287,000
Stutsman	102,300	114,000	210,000	228,500	152,600	153,200	197,000	182,300	.	217,500
Sargent	90,600	102,900	142,700	141,800	114,600	134,200	142,000	142,500	134,700	112,700
Barnes	126,500	99,700	196,000	204,000	143,200	139,500	183,800	171,100	155,800	.
Dickey	107,500	149,900	193,100	199,000	144,900	156,000	176,200	157,200	.	.
La Moure	121,500	136,000	180,700	198,700	.	152,600	173,400	159,500	.	128,800
Grand Forks	89,600	77,800	143,100	112,200	79,200	91,500	131,800	116,700	115,900	129,100
Traill	96,500	91,800	141,900	141,300	84,600	100,600	131,600	119,000	.	108,800
Ransom	64,300	69,700	113,000	123,600	.	98,100	110,300	107,500	98,000	.
Steele	75,700	67,500	112,100	113,800	.	65,000	91,200	81,700	78,000	85,300
Emmons	59,900	95,600	138,600	165,000	114,200	82,700	120,400	112,300	108,300	.
Wells	39,200	46,600	99,200	.	.	75,500	90,900	96,600	87,900	.
McLean	.	21,500	61,000	80,300	71,000	52,100	75,600	87,700	.	75,500
Ramsey	42,200	30,000	58,300	37,500	34,400	36,900	65,400	61,900	51,100	.
Foster	31,600	36,200	60,900	.	56,300	.	72,500	59,000	.	67,900
Benson	32,400	41,700	72,100	60,300	48,000	.	58,200	60,900	49,800	.
Burleigh	18,600	27,600	57,800	67,400	44,300	39,400	.	69,200	52,800	81,400
Walsh	29,400	28,500	60,200	53,900	24,600	27,000	54,200	56,400	41,600	.
Griggs	21,800	23,000	42,000	48,900	.	28,400	40,900	38,700	.	.
Pembina	17,400	19,100	35,400	.	26,300	26,700	44,600	42,100	30,600	.
Eddy	9,900	12,800	26,000	28,900	24,000	22,200	25,700	29,100	25,400	.
Kidder	14,100	19,400	34,900	46,900	27,900	20,500	26,100	.	.	34,600
Nelson	13,500	6,900	27,900	28,600	17,900	17,100	33,300	28,300	23,400	.
Bottineau	3,400	4,800	28,000	37,300	15,500	19,200	37,200	35,700	26,000	.
McIntosh	18,400	36,500	55,600	.	36,200	.	40,500	.	.	.
Ward	.	4,960	25,300	.	18,800	16,000	33,200	31,400	27,500	37,300
Morton	21,700	33,400	63,000	.	.	40,300	44,500	.	.	.
Mchenry	16,800	15,700	53,200	.	.	36,800	56,700	.	.	.
Hettinger	.	12,400	27,200	42,000	29,500	.	26,000	42,600	.	29,800
Grant	17,000	26,900	45,200	.	.	.	49,500	46,600	.	.
Logan	20,700	37,000	56,400	.	.	.	31,100	.	.	.
Stark	8,200	10,900	24,100	27,200	.	27,900	27,400	28,000	.	.

County	Harvested (Acres)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oliver	12,200	10,800	19,700	17,700	.	14,500	19,100	.	.	.
Mercer	6,400	8,200	28,200	22,100	.	.	21,300	.	21,300	.
Adams	.	6,700	20,200	21,000	21,100	.	27,500	.	34,000	.
Sheridan	4,900	8,000	21,500	.	.	.	18,800	.	.	21,900
Pierce	12,500	16,500	34,000	.	.	22,300	.	.	.	.
Towner	4,200	.	12,500	.	9,800	11,600	.	21,300	.	.
Dunn	7,700	6,200	.	14,800	17,100	.	17,900	.	17,500	.
Renville	1,000	.	4,910	9,840	6,500	4,550	12,300	13,900	.	.
Sioux	5,600	8,500	12,400	14,900	.	.	.	.	.	.
Cavalier	1,200	.	5,600	.	4,700	4,200	.	12,300	.	6,900
Slope	1,400	.	7,090	.	.	8,440	8,390	6,700	.	14,000
Rolette	2,100	1,700	6,400	.	4,900	.	.	9,000	.	10,400
Bowman	3,400	8,600	11,500	.	.	.	.	.	12,900	.
Golden Valley	4,400	1,950	.	.	.	5,170	6,490	7,060	.	.
Mountrail	.	690	.	.	3,100	1,730	.	.	4,200	3,030
Mckenzie	.	600	.	3,100	4,100	.	2,900	.	.	3,600
Divide	900	.	2,900	6,620	.	.	1,860	.	.	.
Williams	.	.	3,700	.	4,400	3,120
Billings	500	.	.	.	1,710	1,640
Burke	1,520	.	880	.

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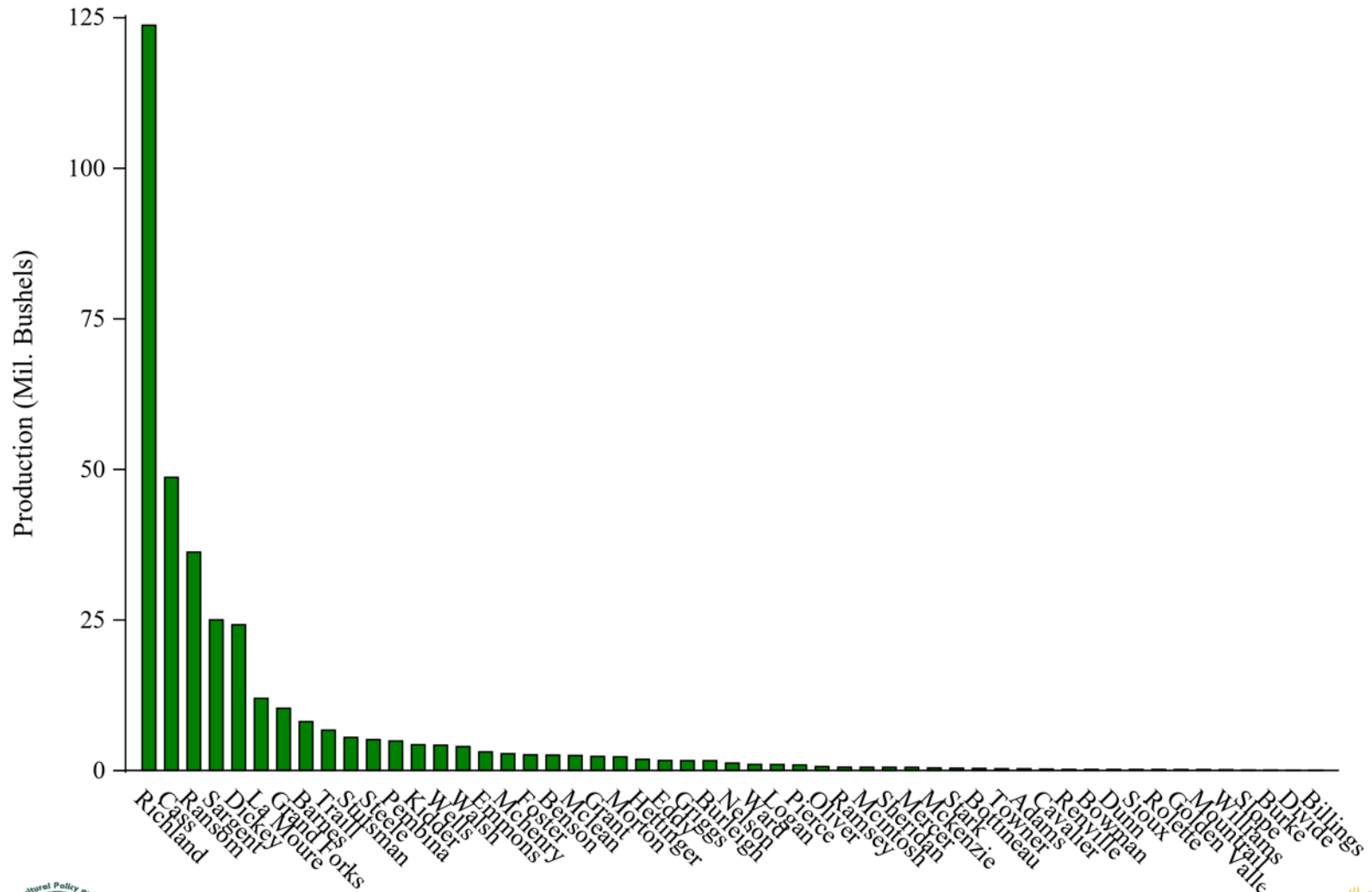
Table 17: Top 15 North Dakota Counties Share based on Harvested Acreage, Annual Trends

County	Share(percentages)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	12.30	12.76	8.69	10.25	12.09	12.08	8.99	10.27	15.86	15.92
Cass	12.65	10.07	10.51	12.13	11.62	10.27	9.41	10.32	16.31	16.56
Stutsman	5.57	5.57	6.11	7.72	8.40	6.86	6.36	6.48	.	12.55
Sargent	4.93	5.03	4.15	4.79	6.31	6.01	4.58	5.06	7.63	6.50
Barnes	6.88	4.87	5.71	6.89	7.89	6.24	5.93	6.08	8.82	.
Dickey	5.85	7.33	5.62	6.72	7.98	6.98	5.69	5.59	.	.
La Moure	6.61	6.65	5.26	6.71	.	6.83	5.59	5.67	.	7.43
Grand Forks	4.88	3.80	4.17	3.79	4.36	4.09	4.25	4.15	6.56	7.45
Traill	5.25	4.49	4.13	4.77	4.66	4.50	4.25	4.23	.	6.28
Ransom	3.50	3.41	3.29	4.18	.	4.39	3.56	3.82	5.55	.
Steele	4.12	3.30	3.26	3.85	.	2.91	2.94	2.90	4.42	4.92
Emmons	3.26	4.67	4.03	5.57	6.29	3.70	3.88	3.99	6.13	.
Wells	2.13	2.28	2.89	.	.	3.38	2.93	3.43	4.98	.
McLean	.	1.05	1.78	2.71	3.91	2.33	2.44	3.12	.	4.36
Ramsey	2.30	1.47	1.70	1.27	1.89	1.65	2.11	2.20	2.89	.
Foster	1.72	1.77	1.77	.	3.10	.	2.34	2.10	.	3.92
Benson	1.76	2.04	2.10	2.04	2.64	.	1.88	2.16	2.82	.
Burleigh	1.01	1.35	1.68	2.28	2.44	1.76	.	2.46	2.99	4.70
Walsh	1.60	1.39	1.75	1.82	1.35	1.21	1.75	2.00	2.36	.
Griggs	1.19	1.12	1.22	1.65	.	1.27	1.32	1.38	.	.
Pembina	0.95	0.93	1.03	.	1.45	1.19	1.44	1.50	1.73	.
Eddy	0.54	0.63	0.76	0.98	1.32	0.99	0.83	1.03	1.44	.
Kidder	0.77	0.95	1.02	1.58	1.54	0.92	0.84	.	.	2.00
Nelson	0.73	0.34	0.81	0.97	0.99	0.77	1.07	1.01	1.33	.
Bottineau	0.19	0.23	0.82	1.26	0.85	0.86	1.20	1.27	1.47	.
McIntosh	1.00	1.78	1.62	.	1.99	.	1.31	.	.	.
Ward	.	0.24	0.74	.	1.04	0.72	1.07	1.12	1.56	2.15
Morton	1.18	1.63	1.83	.	.	1.80	1.44	.	.	.
Mchenry	0.91	0.77	1.55	.	.	1.65	1.83	.	.	.
Hettinger	.	0.61	0.79	1.42	1.62	.	0.84	1.51	.	1.72
Grant	0.93	1.31	1.32	.	.	.	1.60	1.66	.	.

County	Share(percentages)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Logan	1.13	1.81	1.64	.	.	.	1.00	.	.	.
Stark	0.45	0.53	0.70	0.92	.	1.25	0.88	1.00	.	.
Oliver	0.66	0.53	0.57	0.60	.	0.65	0.62	.	.	.
Mercer	0.35	0.40	0.82	0.75	.	.	0.69	.	1.21	.
Adams	.	0.33	0.59	0.71	1.16	.	0.89	.	1.93	.
Sheridan	0.27	0.39	0.63	.	.	.	0.61	.	.	1.26
Pierce	0.68	0.81	0.99	.	.	1.00	.	.	.	.
Towner	0.23	.	0.36	.	0.54	0.52	.	0.76	.	.
Dunn	0.42	0.30	.	0.50	0.94	.	0.58	.	0.99	.
Renville	0.05	.	0.14	0.33	0.36	0.20	0.40	0.49	.	.
Sioux	0.30	0.42	0.36	0.50	.	.	.	.	.	.
Cavalier	0.07	.	0.16	.	0.26	0.19	.	0.44	.	0.40
Slope	0.08	.	0.21	.	.	0.38	0.27	0.24	.	0.81
Rolette	0.11	0.08	0.19	.	0.27	.	.	0.32	.	0.60
Bowman	0.19	0.42	0.33	.	.	.	.	.	0.73	.
Golden Valley	0.24	0.10	.	.	.	0.23	0.21	0.25	.	.
Mountrail	.	0.03	.	.	0.17	0.08	.	.	0.24	0.17
Mckenzie	.	0.03	.	0.10	0.23	.	0.09	.	.	0.21
Divide	0.05	.	0.08	0.22	.	.	0.06	.	.	.
Williams	.	.	0.11	.	0.24	0.14
Billings	0.03	.	.	.	0.09	0.09
Burke	0.05	.	0.05	.

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Figure 20: North Dakota Counties Production, 1980 to 1989



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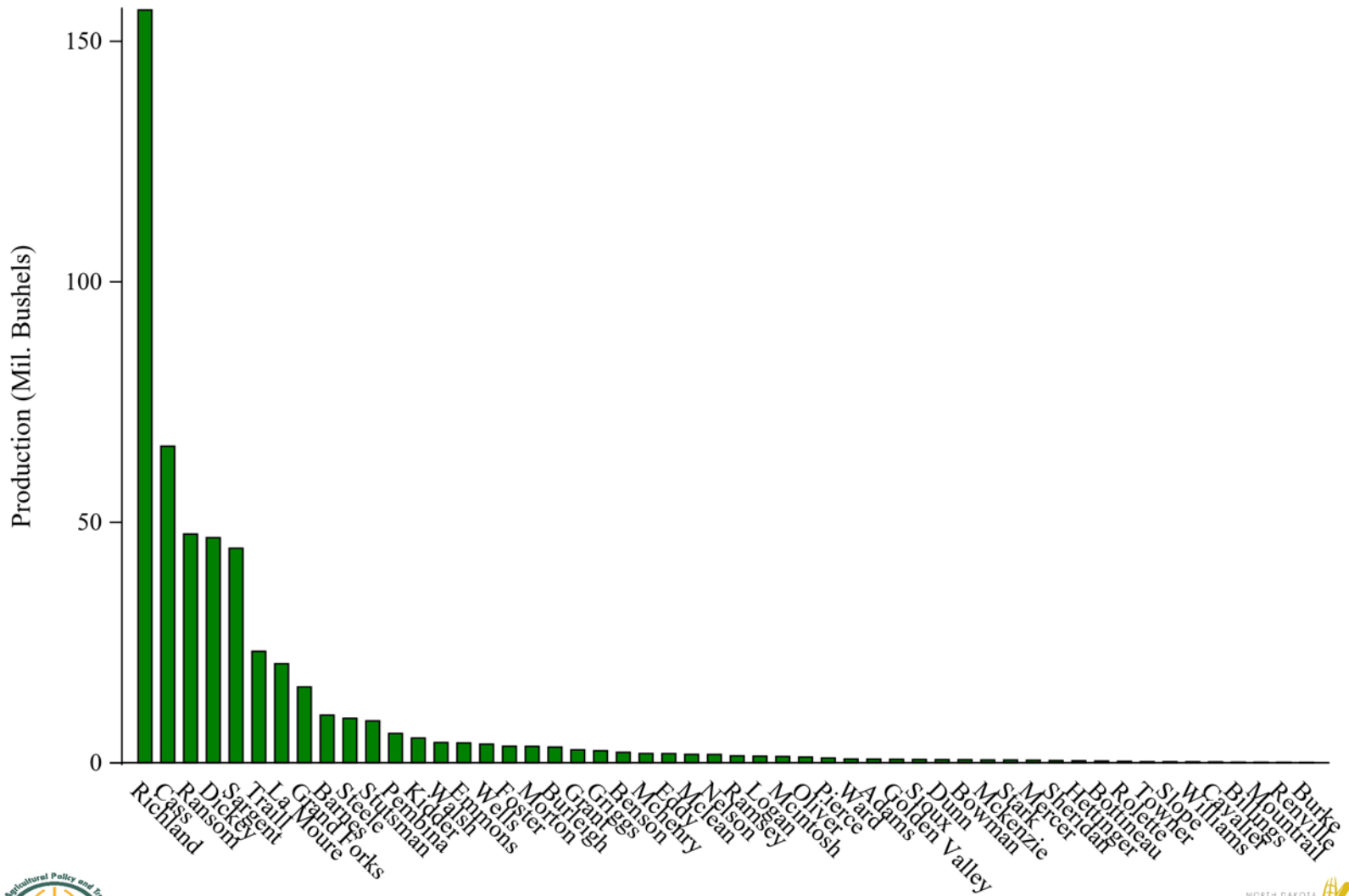
Table 18: North Dakota Counties Production, Descriptive Statistics for 1980 to 1989

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	123,705,300	12,370,530	2,917,135	23.6	34.6
Cass	10	48,650,300	4,865,030	1,479,840	30.4	13.6
Ransom	10	36,237,800	3,623,780	1,118,686	30.9	10.1
Sargent	10	24,993,700	2,499,370	873,495	34.9	6.99
Dickey	10	24,182,600	2,418,260	914,195	37.8	6.76
La Moure	10	11,962,500	1,196,250	553,129	46.2	3.35
Grand Forks	10	10,316,100	1,031,610	461,778	44.8	2.89
Barnes	10	8,100,100	810,010	404,061	49.9	2.27
Traill	10	6,679,500	667,950	308,201	46.1	1.87
Stutsman	10	5,482,300	548,230	334,929	61.1	1.53
Steele	10	5,104,300	510,430	155,757	30.5	1.43
Pembina	10	4,879,000	487,900	289,821	59.4	1.36
Kidder	10	4,268,800	426,880	152,027	35.6	1.19
Wells	10	4,184,700	418,470	297,306	71.0	1.17
Walsh	10	3,950,600	395,060	215,653	54.6	1.11
Emmons	10	3,067,100	306,710	198,293	64.7	0.86
Mchenry	10	2,774,200	277,420	206,855	74.6	0.78
Foster	10	2,581,100	258,110	143,148	55.5	0.72

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Benson	10	2,533,600	253,360	162,198	64.0	0.71
Mclean	10	2,474,100	247,410	172,803	69.8	0.69
Grant	10	2,321,600	232,160	154,319	66.5	0.65
Morton	10	2,259,000	225,900	220,897	97.8	0.63
Hettinger	8	1,836,400	229,550	177,062	77.1	0.51
Eddy	10	1,648,200	164,820	93,645	56.8	0.46
Griggs	10	1,617,500	161,750	31,576	19.5	0.45
Burleigh	10	1,609,500	160,950	123,430	76.7	0.45
Nelson	10	1,211,400	121,140	75,581	62.4	0.34
Ward	10	998,700	99,870	82,688	82.8	0.28
Logan	10	987,900	98,790	49,761	50.4	0.28
Pierce	10	905,200	90,520	72,845	80.5	0.25
Oliver	10	632,800	63,280	75,718	120	0.18
Ramsey	9	528,400	58,711	40,480	68.9	0.15
Mcintosh	9	514,900	57,211	42,744	74.7	0.14
Sheridan	9	510,800	56,756	48,044	84.7	0.14
Mercer	8	504,100	63,013	67,834	108	0.14
Mckenzie	10	412,100	41,210	28,316	68.7	0.12
Stark	8	373,500	46,688	48,687	104	0.10

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Bottineau	10	328,200	32,820	21,086	64.2	0.09
Towner	10	277,500	27,750	17,742	63.9	0.08
Adams	7	272,000	38,857	26,194	67.4	0.08
Cavalier	8	210,700	26,338	14,605	55.5	0.06
Renville	9	171,300	19,033	10,181	53.5	0.05
Bowman	6	171,000	28,500	32,282	113	0.05
Dunn	8	167,800	20,975	20,912	99.7	0.05
Sioux	7	161,100	23,014	19,882	86.4	0.05
Rolette	7	159,200	22,743	15,716	69.1	0.04
Golden Valley	8	147,000	18,375	12,781	69.6	0.04
Mountrail	8	141,500	17,688	16,447	93.0	0.04
Williams	8	118,600	14,825	11,123	75.0	0.03
Slope	6	67,500	11,250	6,039	53.7	0.02
Burke	4	60,200	15,050	11,388	75.7	0.02
Divide	4	15,000	3,750	1,258	33.6	0.00
Billings	2	14,700	7,350	3,182	43.3	0.00

Figure 21: North Dakota Counties Production, 1990 to 1999



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Table 19: North Dakota Counties Production, Descriptive Statistics for 1990 to 1999

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	156,439,700	15,643,970	5,124,746	32.8	30.6
Cass	10	65,789,600	6,578,960	2,241,706	34.1	12.9
Ransom	10	47,531,900	4,753,190	1,541,572	32.4	9.30
Dickey	10	46,774,400	4,677,440	1,589,865	34.0	9.15
Sargent	10	44,583,100	4,458,310	1,593,410	35.7	8.72
Traill	10	23,153,200	2,315,320	1,980,721	85.5	4.53
La Moure	10	20,587,400	2,058,740	1,014,341	49.3	4.03
Grand Forks	10	15,747,600	1,574,760	1,069,270	67.9	3.08
Barnes	10	9,901,000	990,100	788,088	79.6	1.94
Steele	10	9,234,300	923,430	627,705	68.0	1.81
Stutsman	10	8,699,100	869,910	512,560	58.9	1.70
Pembina	10	6,094,100	609,410	418,366	68.7	1.19
Kidder	10	5,129,100	512,910	326,436	63.6	1.00
Walsh	10	4,198,700	419,870	289,285	68.9	0.82
Emmons	10	4,110,300	411,030	240,909	58.6	0.80
Wells	10	3,854,000	385,400	161,339	41.9	0.75
Foster	10	3,425,700	342,570	182,655	53.3	0.67
Morton	10	3,400,900	340,090	241,624	71.0	0.67

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Burleigh	10	3,259,200	325,920	264,793	81.2	0.64
Grant	10	2,672,000	267,200	191,197	71.6	0.52
Griggs	10	2,487,600	248,760	182,817	73.5	0.49
Benson	10	2,161,100	216,110	138,226	64.0	0.42
Mchenry	10	1,918,600	191,860	134,858	70.3	0.38
Eddy	10	1,900,900	190,090	102,041	53.7	0.37
Mclean	10	1,731,400	173,140	72,022	41.6	0.34
Nelson	10	1,716,100	171,610	209,531	122	0.34
Ramsey	9	1,421,300	157,922	216,520	137	0.28
Logan	9	1,359,300	151,033	67,495	44.7	0.27
Mcintosh	9	1,287,700	143,078	135,271	94.5	0.25
Oliver	9	1,176,500	130,722	114,375	87.5	0.23
Pierce	9	980,600	108,956	56,950	52.3	0.19
Ward	10	767,100	76,710	48,054	62.6	0.15
Adams	9	743,200	82,578	104,369	126	0.15
Golden Valley	9	706,800	78,533	101,830	130	0.14
Sioux	8	673,500	84,188	80,102	95.1	0.13
Dunn	8	635,900	79,488	111,811	141	0.12
Bowman	6	620,600	103,433	125,320	121	0.12

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Mckenzie	8	571,500	71,438	59,098	82.7	0.11
Stark	8	569,900	71,238	63,576	89.2	0.11
Mercer	9	529,300	58,811	77,267	131	0.10
Sheridan	10	463,200	46,320	29,941	64.6	0.09
Hettinger	9	411,600	45,733	55,206	121	0.08
Bottineau	10	356,800	35,680	25,129	70.4	0.07
Rolette	8	295,000	36,875	36,277	98.4	0.06
Towner	7	216,700	30,957	35,027	113	0.04
Slope	5	211,400	42,280	36,138	85.5	0.04
Williams	9	196,200	21,800	16,543	75.9	0.04
Cavalier	7	167,300	23,900	18,884	79.0	0.03
Billings	5	109,200	21,840	13,541	62.0	0.02
Mountrail	6	95,200	15,867	9,086	57.3	0.02
Renville	6	81,500	13,583	8,230	60.6	0.02
Burke	3	35,100	11,700	7,645	65.3	0.01

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Figure 22: North Dakota Counties Production, 2000 to 2009

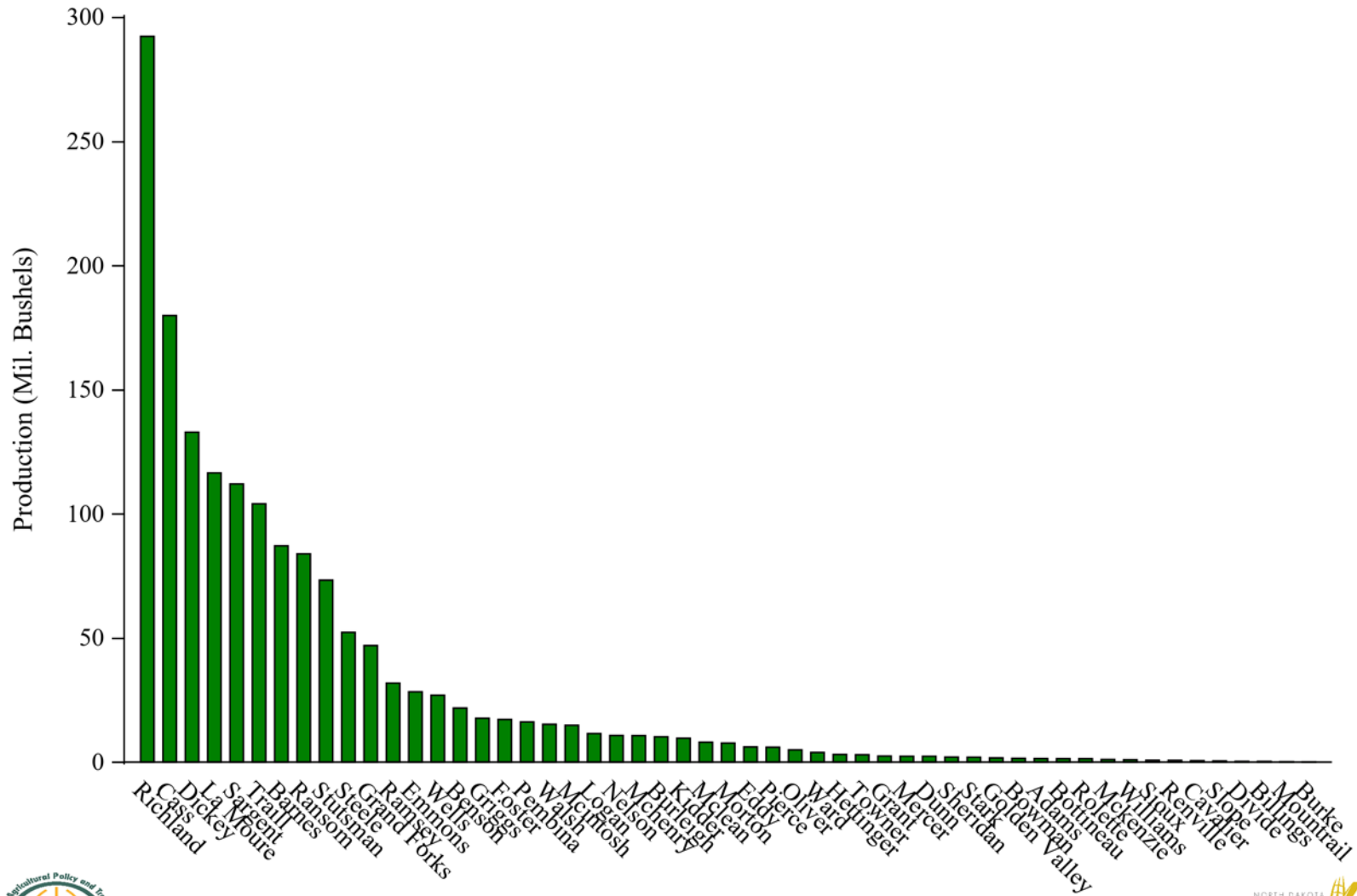


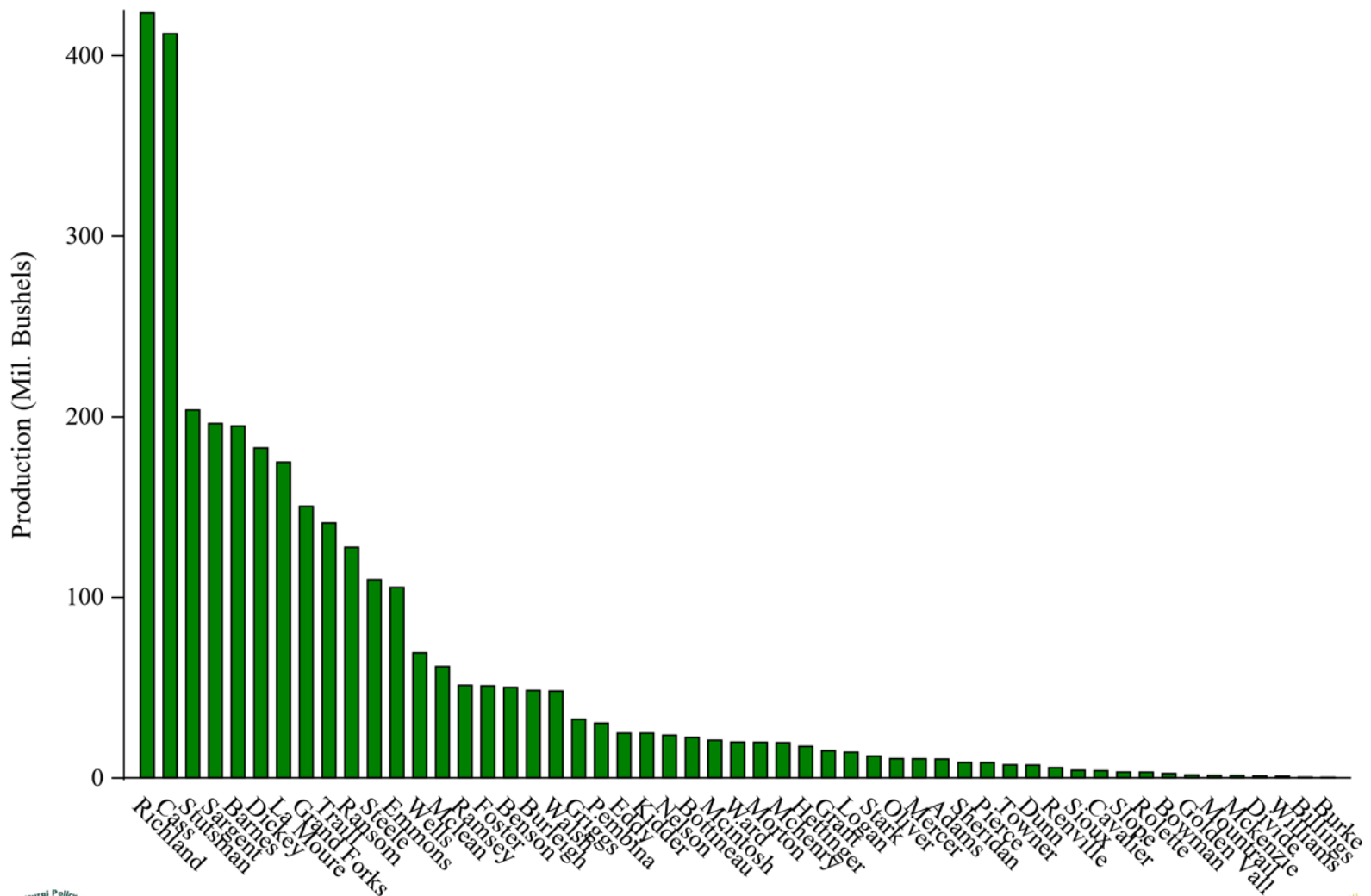
Table 20: North Dakota Counties Production, Descriptive Statistics for 2000 to 2009

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	292,314,400	29,231,440	4,996,968	17.1	18.4
Cass	10	179,852,700	17,985,270	9,725,055	54.1	11.3
Dickey	10	132,883,300	13,288,330	3,492,067	26.3	8.36
La Moure	10	116,491,000	11,649,100	5,536,227	47.5	7.32
Sargent	10	112,048,200	11,204,820	2,818,993	25.2	7.05
Traill	10	104,033,600	10,403,360	4,670,387	44.9	6.54
Barnes	10	87,112,500	8,711,250	5,702,250	65.5	5.48
Ransom	10	83,888,600	8,388,860	2,005,159	23.9	5.27
Stutsman	10	73,283,400	7,328,340	5,950,895	81.2	4.61
Steele	10	52,269,400	5,226,940	3,317,017	63.5	3.29
Grand Forks	10	46,957,200	4,695,720	3,414,573	72.7	2.95
Ramsey	10	31,796,800	3,179,680	2,322,780	73.1	2.00
Emmons	10	28,320,800	2,832,080	1,942,948	68.6	1.78
Wells	10	26,933,500	2,693,350	2,163,907	80.3	1.69
Benson	10	21,790,800	2,179,080	1,591,351	73.0	1.37
Griggs	10	17,671,800	1,767,180	1,315,969	74.5	1.11
Foster	9	17,179,200	1,908,800	1,593,297	83.5	1.08
Pembina	9	16,175,200	1,797,244	1,488,845	82.8	1.02

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Walsh	9	15,231,000	1,692,333	1,498,319	88.5	0.96
Mcintosh	10	14,841,000	1,484,100	679,402	45.8	0.93
Logan	10	11,494,500	1,149,450	836,592	72.8	0.72
Nelson	9	10,723,700	1,191,522	1,116,599	93.7	0.67
Mchenry	9	10,667,000	1,185,222	676,525	57.1	0.67
Burleigh	9	10,203,400	1,133,711	675,722	59.6	0.64
Kidder	9	9,638,000	1,070,889	328,590	30.7	0.61
Mclean	9	8,014,200	890,467	763,989	85.8	0.50
Morton	10	7,665,300	766,530	516,172	67.3	0.48
Eddy	8	6,116,100	764,513	580,549	75.9	0.38
Pierce	9	5,993,400	665,933	357,645	53.7	0.38
Oliver	9	4,924,300	547,144	395,154	72.2	0.31
Ward	9	3,890,300	432,256	326,022	75.4	0.24
Hettinger	9	3,085,100	342,789	264,906	77.3	0.19
Towner	6	2,962,300	493,717	398,781	80.8	0.19
Grant	4	2,431,000	607,750	415,677	68.4	0.15
Mercer	9	2,348,900	260,989	201,872	77.3	0.15
Dunn	10	2,337,800	233,780	164,452	70.3	0.15
Sheridan	6	2,013,800	335,633	240,174	71.6	0.13

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Stark	9	1,958,000	217,556	168,584	77.5	0.12
Golden Valley	8	1,697,900	212,238	97,985	46.2	0.11
Bowman	9	1,516,500	168,500	127,514	75.7	0.10
Adams	9	1,421,100	157,900	92,010	58.3	0.09
Bottineau	6	1,380,100	230,017	81,188	35.3	0.09
Rolette	7	1,371,700	195,957	116,321	59.4	0.09
Mckenzie	9	1,078,800	119,867	57,857	48.3	0.07
Williams	8	977,700	122,213	103,582	84.8	0.06
Sioux	3	765,500	255,167	132,847	52.1	0.05
Renville	5	727,500	145,500	72,844	50.1	0.05
Cavalier	6	597,300	99,550	114,699	115	0.04
Slope	6	483,100	80,517	27,850	34.6	0.03
Divide	3	301,000	100,333	40,278	40.1	0.02
Billings	5	283,100	56,620	25,728	45.4	0.02
Mountrail	4	155,600	38,900	23,156	59.5	0.01
Burke	1	32,000	32,000	.	.	0.00

Figure 23: North Dakota Counties Production, 2010 to 2019



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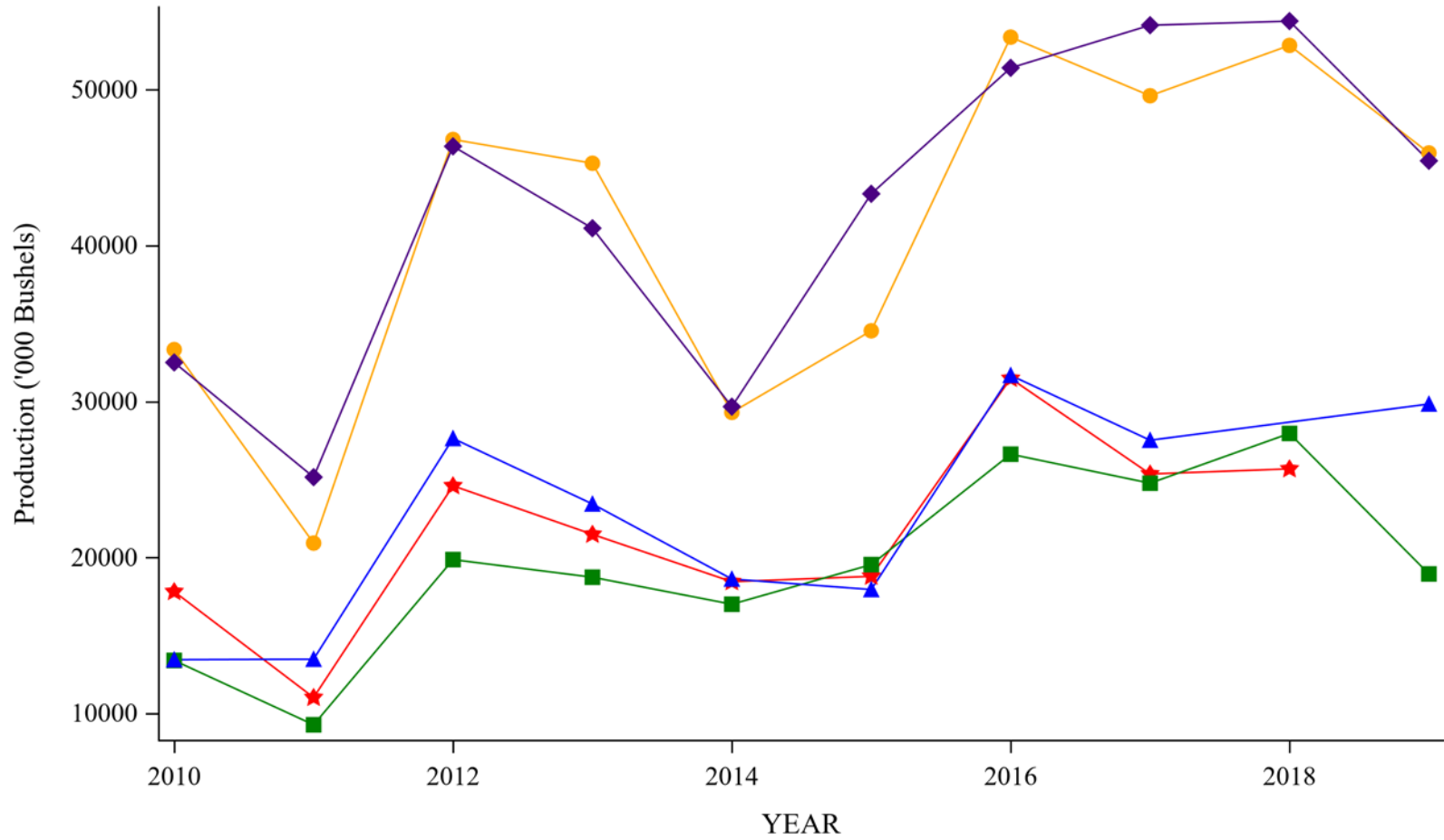
Table 21: North Dakota Counties Production, Descriptive Statistics for 2010 to 2019

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Richland	10	423,586,000	42,358,600	10,260,325	24.2	13.3
Cass	10	412,030,000	41,203,000	10,974,527	26.6	12.9
Stutsman	9	203,665,000	22,629,444	6,979,729	30.8	6.39
Sargent	10	196,176,000	19,617,600	5,764,033	29.4	6.15
Barnes	9	194,740,000	21,637,778	5,932,093	27.4	6.11
Dickey	8	182,598,000	22,824,750	5,421,547	23.8	5.73
La Moure	8	174,783,000	21,847,875	5,021,063	23.0	5.48
Grand Forks	10	150,324,000	15,032,400	4,391,962	29.2	4.71
Traill	9	141,106,000	15,678,444	3,780,308	24.1	4.43
Ransom	8	127,592,000	15,949,000	4,859,307	30.5	4.00
Steele	9	109,694,000	12,188,222	2,547,113	20.9	3.44
Emmons	9	105,428,000	11,714,222	3,416,686	29.2	3.31
Wells	7	69,123,000	9,874,714	3,945,748	40.0	2.17
McLean	8	61,572,000	7,696,500	2,828,855	36.8	1.93
Ramsey	9	51,205,000	5,689,444	2,094,418	36.8	1.61
Foster	7	50,903,000	7,271,857	2,870,002	39.5	1.60
Benson	8	50,038,000	6,254,750	1,650,292	26.4	1.57
Burleigh	9	48,341,000	5,371,222	2,610,926	48.6	1.52

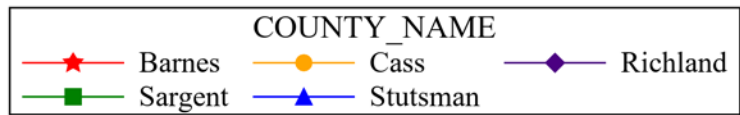
County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Walsh	9	48,025,000	5,336,111	2,201,634	41.3	1.51
Griggs	7	32,391,000	4,627,286	1,528,318	33.0	1.02
Pembina	8	30,213,000	3,776,625	1,513,864	40.1	0.95
Eddy	9	24,734,000	2,748,222	933,390	34.0	0.78
Kidder	8	24,726,000	3,090,750	1,118,302	36.2	0.78
Nelson	9	23,559,000	2,617,667	1,185,754	45.3	0.74
Bottineau	9	22,290,000	2,476,667	1,635,159	66.0	0.70
Mcintosh	5	20,807,000	4,161,400	1,514,600	36.4	0.65
Ward	8	19,738,000	2,467,250	1,202,310	48.7	0.62
Morton	5	19,627,000	3,925,400	1,559,908	39.7	0.62
Mchenry	5	19,414,000	3,882,800	2,497,323	64.3	0.61
Hettinger	7	17,415,000	2,487,857	1,090,434	43.8	0.55
Grant	5	14,941,000	2,988,200	1,527,815	51.1	0.47
Logan	4	14,143,000	3,535,750	1,078,166	30.5	0.44
Stark	7	11,983,000	1,711,857	753,024	44.0	0.38
Oliver	6	10,560,000	1,760,000	523,559	29.7	0.33
Mercer	6	10,482,000	1,747,000	844,770	48.4	0.33
Adams	6	10,323,000	1,720,500	771,736	44.9	0.32
Sheridan	5	8,466,000	1,693,200	1,016,029	60.0	0.27

County	Production (Bushels)					
	N	Sum	Mean	Risk	Coefficient of Variation	Share
Pierce	4	8,377,000	2,094,250	889,247	42.5	0.26
Towner	5	7,184,000	1,436,800	729,244	50.8	0.23
Dunn	6	7,064,000	1,177,333	512,711	43.5	0.22
Renville	7	5,616,700	802,386	506,878	63.2	0.18
Sioux	4	4,156,000	1,039,000	467,831	45.0	0.13
Cavalier	6	3,919,000	653,167	443,209	67.9	0.12
Slope	6	3,155,500	525,917	404,512	76.9	0.10
Rolette	6	3,112,000	518,667	351,863	67.8	0.10
Bowman	4	2,379,000	594,750	263,266	44.3	0.07
Golden Valley	5	1,518,000	303,600	145,273	47.9	0.05
Mountrail	5	1,339,100	267,820	156,228	58.3	0.04
Mckenzie	5	1,307,000	261,400	112,875	43.2	0.04
Divide	4	1,191,300	297,825	278,356	93.5	0.04
Williams	3	1,017,000	339,000	103,320	30.5	0.03
Billings	3	335,500	111,833	79,791	71.3	0.01
Burke	2	263,800	131,900	61,660	46.7	0.01

Figure 24: Top 5 North Dakota Counties Production, Annual Trends



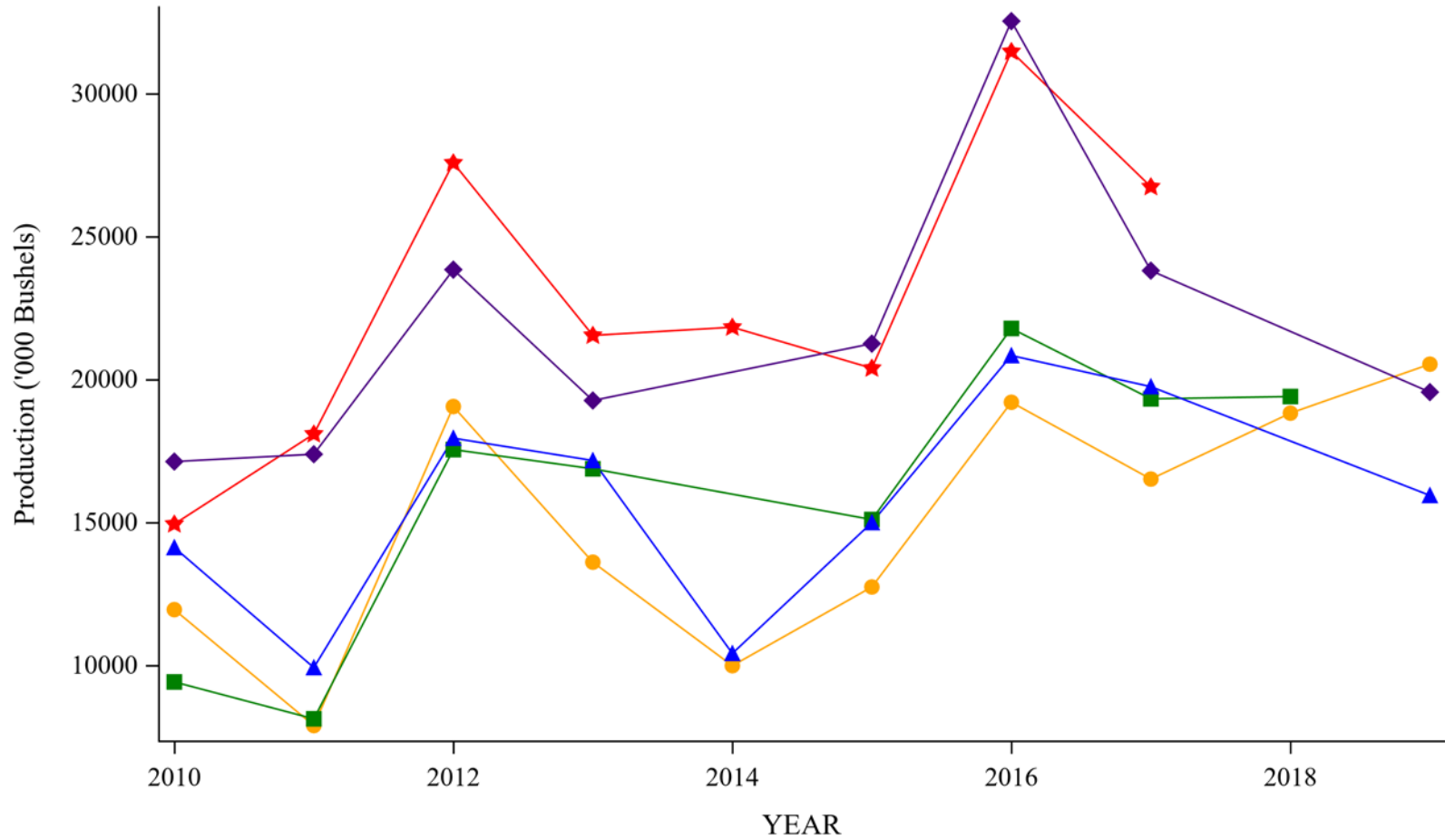
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Figure 25: Top 6 to 10 North Dakota Counties Production, Annual Trends



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Figure 26: Top 11 to 15 North Dakota Counties Production, Annual Trends

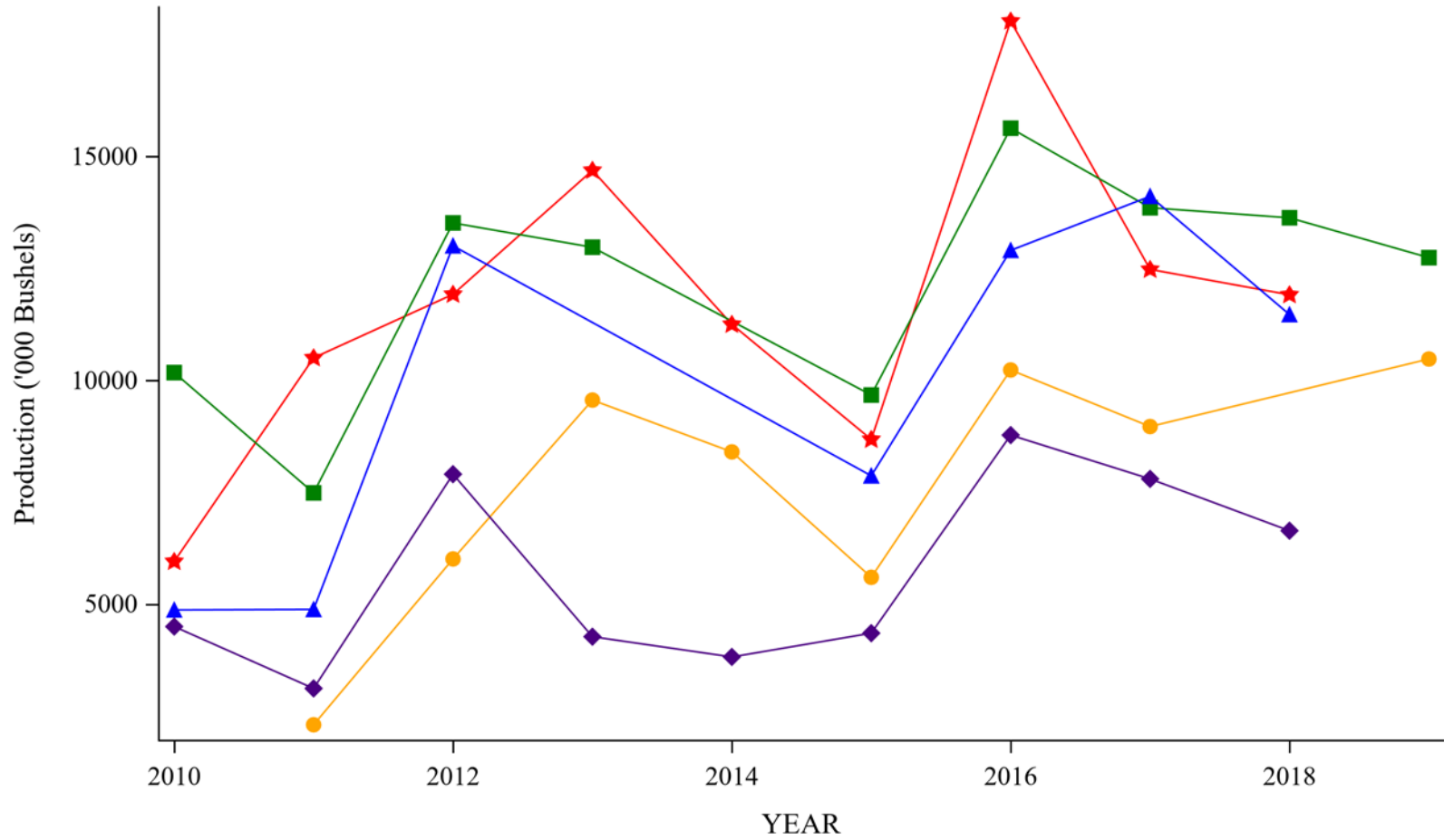


Table 22: Top 15 North Dakota Counties Production, Annual Trends

County	Production (Bushels)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	32,515,000	25,160,000	46,375,000	41,123,000	29,680,000	43,331,000	51,408,000	54,143,000	54,406,000	45,445,000
Cass	33,341,000	20,930,000	46,815,000	45,290,000	29,312,000	34,545,000	53,379,000	49,619,000	52,848,000	45,951,000
Stutsman	13,453,000	13,485,000	27,643,000	23,439,000	18,626,000	17,952,000	31,689,000	27,528,000	.	29,850,000
Sargent	13,403,000	9,279,000	19,871,000	18,742,000	17,010,000	19,550,000	26,632,000	24,772,000	27,964,000	18,953,000
Barnes	17,818,000	11,029,000	24,604,000	21,491,000	18,455,000	18,799,000	31,490,000	25,363,000	25,691,000	.
Dickey	14,944,000	18,093,000	27,578,000	21,544,000	21,829,000	20,395,000	31,472,000	26,743,000	.	.
La Moure	17,130,000	17,387,000	23,843,000	19,266,000	.	21,255,000	32,536,000	23,808,000	.	19,558,000
Grand Forks	11,950,000	7,895,000	19,055,000	13,610,000	9,989,000	12,743,000	19,204,000	16,518,000	18,823,000	20,537,000
Traill	14,123,000	9,922,000	17,947,000	17,167,000	10,418,000	14,996,000	20,838,000	19,750,000	.	15,945,000
Ransom	9,421,000	8,130,000	17,549,000	16,877,000	.	15,101,000	21,786,000	19,324,000	19,404,000	.
Steele	10,175,000	7,488,000	13,517,000	12,974,000	.	9,674,000	15,634,000	13,858,000	13,632,000	12,742,000
Emmons	5,956,000	10,505,000	11,923,000	14,692,000	11,252,000	8,682,000	18,025,000	12,480,000	11,913,000	.
Wells	4,874,000	4,885,000	13,006,000	.	.	7,870,000	12,905,000	14,112,000	11,471,000	.
McLean	.	2,309,000	6,013,000	9,561,000	8,404,000	5,603,000	10,233,000	8,970,000	.	10,479,000
Ramsey	4,502,000	3,120,000	7,906,000	4,276,000	3,824,000	4,355,000	8,779,000	7,800,000	6,643,000	.
Foster	3,715,000	3,723,000	8,627,000	.	6,237,000	.	11,060,000	7,669,000	.	9,872,000
Benson	3,818,000	4,357,000	7,861,000	6,254,000	5,411,000	.	8,533,000	7,222,000	6,582,000	.
Burleigh	1,888,000	2,787,000	5,607,000	5,516,000	4,415,000	3,929,000	.	6,920,000	6,531,000	10,748,000
Walsh	3,619,000	2,758,000	7,781,000	5,930,000	2,904,000	3,729,000	7,562,000	8,402,000	5,340,000	.
Griggs	2,961,000	2,501,000	5,084,000	5,589,000	.	3,912,000	6,559,000	5,785,000	.	.
Pembina	2,199,000	1,673,000	3,631,000	.	3,349,000	3,716,000	6,078,000	5,677,000	3,890,000	.
Eddy	1,253,000	1,342,000	3,321,000	2,848,000	2,948,000	2,394,000	3,868,000	3,697,000	3,063,000	.
Kidder	1,640,000	2,344,000	3,278,000	3,533,000	3,037,000	1,864,000	4,130,000	.	.	4,900,000

County	Production (Bushels)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Nelson	1,515,000	773,000	3,183,000	3,065,000	1,863,000	2,008,000	4,557,000	3,789,000	2,806,000	.
Bottineau	299,000	452,000	2,532,000	4,117,000	1,487,000	2,123,000	5,163,000	3,713,000	2,404,000	.
Mcintosh	2,110,000	3,523,000	5,353,000	.	3,906,000	.	5,915,000	.	.	.
Ward	.	385,000	2,331,000	.	2,088,000	1,739,000	4,344,000	2,698,000	2,455,000	3,698,000
Morton	2,193,000	2,570,000	5,474,000	.	.	3,885,000	5,505,000	.	.	.
Mchenry	1,743,000	1,454,000	4,730,000	.	.	3,896,000	7,591,000	.	.	.
Hettinger	.	983,000	1,823,000	4,478,000	2,776,000	.	2,430,000	2,027,000	.	2,898,000
Grant	1,569,000	2,315,000	3,599,000	.	.	.	5,372,000	2,086,000	.	.
Logan	1,992,000	3,653,000	4,440,000	.	.	.	4,058,000	.	.	.
Stark	719,000	1,025,000	1,480,000	2,595,000	.	2,000,000	2,696,000	1,468,000	.	.
Oliver	1,438,000	1,225,000	1,980,000	1,951,000	.	1,352,000	2,614,000	.	.	.
Mercer	590,000	798,000	2,106,000	2,391,000	.	.	2,596,000	.	2,001,000	.
Adams	.	508,000	1,409,000	1,905,000	1,617,000	.	2,039,000	.	2,845,000	.
Sheridan	478,000	721,000	2,159,000	.	.	.	2,619,000	.	.	2,489,000
Pierce	1,345,000	1,503,000	3,295,000	.	.	2,234,000	.	.	.	.
Towner	534,000	.	1,637,000	.	1,137,000	1,355,000	.	2,521,000	.	.
Dunn	580,000	493,000	.	1,391,000	1,530,000	.	1,713,000	.	1,357,000	.
Renville	104,700	.	414,000	1,070,000	735,000	490,000	1,480,000	1,323,000	.	.
Sioux	520,000	912,000	1,077,000	1,647,000	.	.	.	.	.	.
Cavalier	137,000	.	577,000	.	491,000	453,000	.	1,437,000	.	824,000
Slope	125,500	.	357,000	.	.	642,000	485,000	277,000	.	1,269,000
Rolette	172,000	142,000	476,000	.	479,000	.	.	801,000	.	1,042,000
Bowman	273,000	548,000	648,000	.	.	.	.	.	910,000	.
Golden Valley	335,000	115,000	.	.	.	324,000	510,000	234,000	.	.

County	Production (Bushels)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Mountrail	.	58,100	.	.	324,000	159,000	.	.	445,000	353,000
Mckenzie	.	77,000	.	316,000	294,000	.	246,000	.	.	374,000
Divide	99,800	.	227,000	708,000	.	.	156,500	.	.	.
Williams	.	.	424,000	.	369,000	224,000
Billings	20,500	.	.	.	147,000	168,000
Burke	175,500	.	88,300	.

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Table 23: Top 15 North Dakota Counties Share based on Production, Annual Trends

County	Share(percentages)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	13.35	11.68	11.03	12.26	13.11	14.58	10.36	13.12	19.19	17.61
Cass	13.69	9.72	11.13	13.51	12.95	11.62	10.76	12.03	18.64	17.80
Stutsman	5.52	6.26	6.57	6.99	8.23	6.04	6.39	6.67	.	11.57
Sargent	5.50	4.31	4.72	5.59	7.52	6.58	5.37	6.00	9.86	7.34
Barnes	7.31	5.12	5.85	6.41	8.15	6.32	6.35	6.15	9.06	.
Dickey	6.13	8.40	6.56	6.42	9.64	6.86	6.34	6.48	.	.
La Moure	7.03	8.07	5.67	5.74	.	7.15	6.56	5.77	.	7.58
Grand Forks	4.91	3.67	4.53	4.06	4.41	4.29	3.87	4.00	6.64	7.96
Traill	5.80	4.61	4.27	5.12	4.60	5.04	4.20	4.79	.	6.18
Ransom	3.87	3.78	4.17	5.03	.	5.08	4.39	4.68	6.84	.
Steele	4.18	3.48	3.21	3.87	.	3.25	3.15	3.36	4.81	4.94
Emmons	2.45	4.88	2.83	4.38	4.97	2.92	3.63	3.03	4.20	.
Wells	2.00	2.27	3.09	.	.	2.65	2.60	3.42	4.05	.
McLean	.	1.07	1.43	2.85	3.71	1.88	2.06	2.17	.	4.06
Ramsey	1.85	1.45	1.88	1.28	1.69	1.46	1.77	1.89	2.34	.
Foster	1.53	1.73	2.05	.	2.76	.	2.23	1.86	.	3.82
Benson	1.57	2.02	1.87	1.86	2.39	.	1.72	1.75	2.32	.
Burleigh	0.78	1.29	1.33	1.64	1.95	1.32	.	1.68	2.30	4.16
Walsh	1.49	1.28	1.85	1.77	1.28	1.25	1.52	2.04	1.88	.
Griggs	1.22	1.16	1.21	1.67	.	1.32	1.32	1.40	.	.
Pembina	0.90	0.78	0.86	.	1.48	1.25	1.23	1.38	1.37	.
Eddy	0.51	0.62	0.79	0.85	1.30	0.81	0.78	0.90	1.08	.
Kidder	0.67	1.09	0.78	1.05	1.34	0.63	0.83	.	.	1.90
Nelson	0.62	0.36	0.76	0.91	0.82	0.68	0.92	0.92	0.99	.
Bottineau	0.12	0.21	0.60	1.23	0.66	0.71	1.04	0.90	0.85	.
McIntosh	0.87	1.64	1.27	.	1.73	.	1.19	.	.	.
Ward	.	0.18	0.55	.	0.92	0.58	0.88	0.65	0.87	1.43
Morton	0.90	1.19	1.30	.	.	1.31	1.11	.	.	.
Mchenry	0.72	0.68	1.12	.	.	1.31	1.53	.	.	.
Hettinger	.	0.46	0.43	1.34	1.23	.	0.49	0.49	.	1.12
Grant	0.64	1.08	0.86	.	.	.	1.08	0.51	.	.
Logan	0.82	1.70	1.06	.	.	.	0.82	.	.	.
Stark	0.30	0.48	0.35	0.77	.	0.67	0.54	0.36	.	.

County	Share(percentages)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oliver	0.59	0.57	0.47	0.58	.	0.45	0.53	.	.	.
Mercer	0.24	0.37	0.50	0.71	.	.	0.52	.	0.71	.
Adams	.	0.24	0.34	0.57	0.71	.	0.41	.	1.00	.
Sheridan	0.20	0.33	0.51	.	.	.	0.53	.	.	0.96
Pierce	0.55	0.70	0.78	.	.	0.75	.	.	.	.
Towner	0.22	.	0.39	.	0.50	0.46	.	0.61	.	.
Dunn	0.24	0.23	.	0.41	0.68	.	0.35	.	0.48	.
Renville	0.04	.	0.10	0.32	0.32	0.16	0.30	0.32	.	.
Sioux	0.21	0.42	0.26	0.49	.	.	.	.	.	.
Cavalier	0.06	.	0.14	.	0.22	0.15	.	0.35	.	0.32
Slope	0.05	.	0.08	.	.	0.22	0.10	0.07	.	0.49
Rolette	0.07	0.07	0.11	.	0.21	.	.	0.19	.	0.40
Bowman	0.11	0.25	0.15	.	.	.	.	.	0.32	.
Golden Valley	0.14	0.05	.	.	.	0.11	0.10	0.06	.	.
Mountrail	.	0.03	.	.	0.14	0.05	.	.	0.16	0.14
Mckenzie	.	0.04	.	0.09	0.13	.	0.05	.	.	0.14
Divide	0.04	.	0.05	0.21	.	.	0.03	.	.	.
Williams	.	.	0.10	.	0.16	0.08
Billings	0.01	.	.	.	0.06	0.07
Burke	0.04	.	0.03	.

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Figure 27: North Dakota Counties Yield, 1980 to 1989

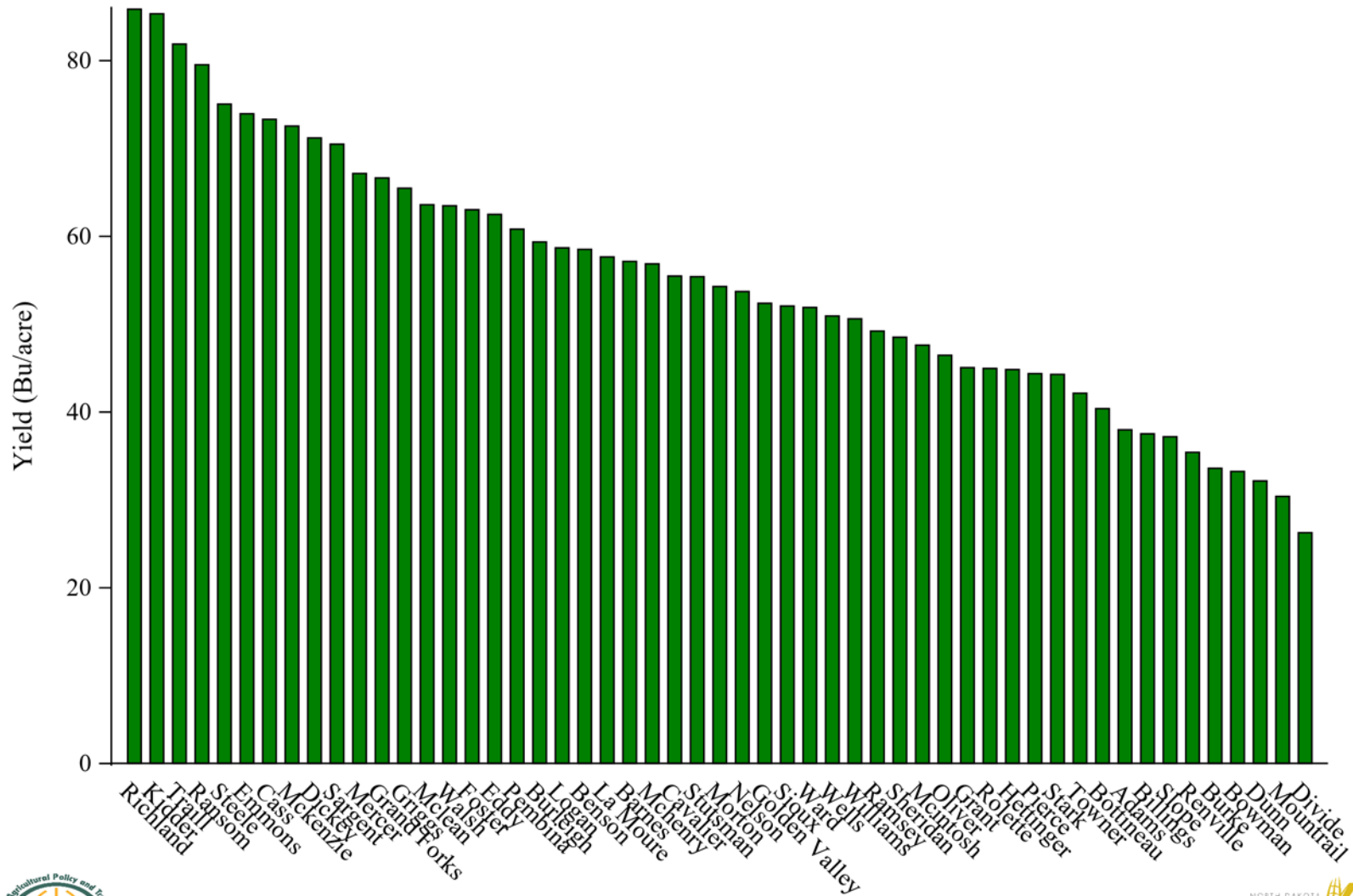


Table 24: North Dakota Counties Yield, Descriptive Statistics for 1980 to 1989

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Richland	10	85.82	13.62	15.9
Kidder	10	85.30	19.45	22.8
Traill	10	81.85	18.27	22.3
Ransom	10	79.50	16.99	21.4
Steele	10	75.02	23.90	31.9
Emmons	10	73.92	26.30	35.6
Cass	10	73.29	18.75	25.6
Mckenzie	10	72.52	26.30	36.3
Dickey	10	71.17	12.52	17.6
Sargent	10	70.46	15.71	22.3
Mercer	8	67.13	19.81	29.5
Grand Forks	10	66.62	20.40	30.6
Griggs	10	65.45	8.01	12.2
Mclean	10	63.57	11.45	18.0
Walsh	10	63.45	22.79	35.9
Foster	10	63.00	15.83	25.1
Eddy	10	62.47	17.65	28.3
Pembina	10	60.79	18.71	30.8
Burleigh	10	59.33	16.15	27.2

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Logan	10	58.66	18.79	32.0
Benson	10	58.49	17.04	29.1
La Moure	10	57.63	13.84	24.0
Barnes	10	57.12	18.23	31.9
Mchenry	10	56.84	13.92	24.5
Cavalier	8	55.45	12.51	22.6
Stutsman	10	55.38	14.21	25.7
Morton	10	54.26	14.71	27.1
Nelson	10	53.69	12.76	23.8
Golden Valley	8	52.35	15.72	30.0
Sioux	7	52.04	17.13	32.9
Ward	10	51.88	20.79	40.1
Wells	10	50.91	21.07	41.4
Williams	8	50.59	21.61	42.7
Ramsey	9	49.19	19.33	39.3
Sheridan	9	48.49	19.96	41.2
Mcintosh	9	47.59	13.84	29.1
Oliver	10	46.44	27.14	58.4
Grant	10	45.03	7.97	17.7
Rolette	7	44.94	19.61	43.6

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Hettinger	8	44.81	16.70	37.3
Pierce	10	44.35	17.10	38.6
Stark	8	44.26	20.57	46.5
Towner	10	42.12	14.97	35.5
Bottineau	10	40.37	14.99	37.1
Adams	7	37.96	15.53	40.9
Billings	2	37.50	19.09	50.9
Slope	6	37.17	17.93	48.2
Renville	9	35.39	15.19	42.9
Burke	4	33.58	18.83	56.1
Bowman	6	33.22	22.62	68.1
Dunn	8	32.14	16.68	51.9
Mountrail	8	30.38	16.11	53.0
Divide	4	26.25	9.46	36.1

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Figure 28: North Dakota Counties Yield, 1990 to 1999

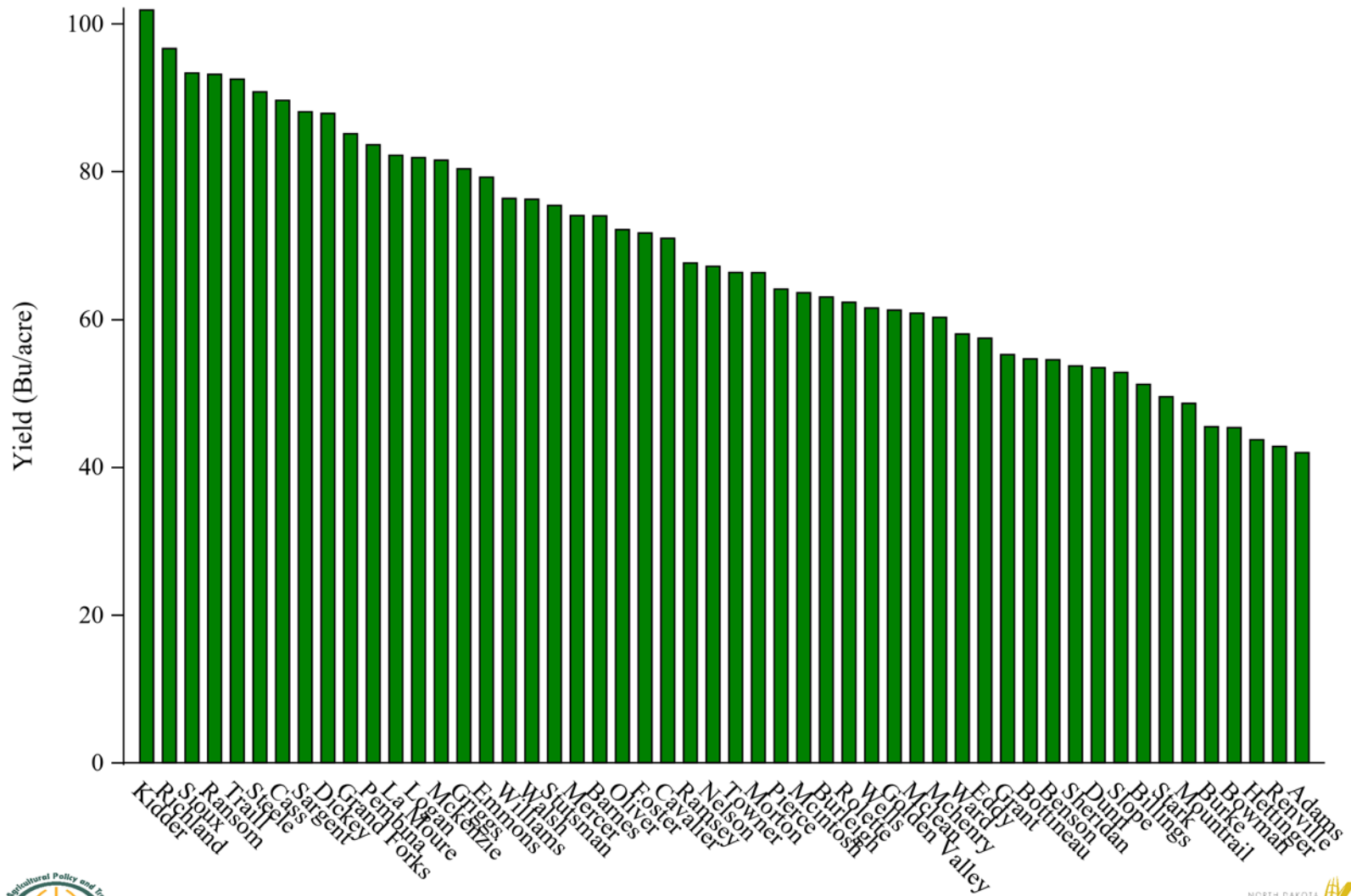


Table 25: North Dakota Counties Yield, Descriptive Statistics for 1990 to 1999

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Kidder	10	101.86	32.20	31.6
Richland	10	96.65	24.46	25.3
Sioux	8	93.34	27.24	29.2
Ransom	10	93.16	26.27	28.2
Traill	10	92.50	23.22	25.1
Steele	10	90.78	25.06	27.6
Cass	10	89.64	21.34	23.8
Sargent	10	88.09	23.25	26.4
Dickey	10	87.87	25.32	28.8
Grand Forks	10	85.12	19.13	22.5
Pembina	10	83.63	26.38	31.5
La Moure	10	82.20	25.06	30.5
Logan	9	81.89	11.12	13.6
Mckenzie	9	81.54	21.39	26.2
Griggs	10	80.37	20.34	25.3
Emmons	10	79.24	23.12	29.2
Williams	9	76.37	21.98	28.8
Walsh	10	76.25	18.52	24.3
Stutsman	10	75.42	20.19	26.8

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Mercer	9	74.04	32.44	43.8
Barnes	10	74.01	22.48	30.4
Oliver	9	72.14	24.16	33.5
Foster	10	71.69	23.75	33.1
Cavalier	7	70.97	25.66	36.2
Ramsey	9	67.62	17.82	26.3
Nelson	10	67.18	22.58	33.6
Towner	7	66.34	22.47	33.9
Morton	10	66.32	15.20	22.9
Pierce	9	64.10	21.63	33.7
Mcintosh	9	63.60	15.05	23.7
Burleigh	10	63.02	15.49	24.6
Rolette	9	62.31	15.15	24.3
Wells	10	61.53	18.06	29.3
Golden Valley	9	61.26	14.03	22.9
Mclean	10	60.83	18.69	30.7
Mchenry	10	60.27	21.46	35.6
Ward	10	58.02	17.12	29.5
Eddy	10	57.45	17.75	30.9
Grant	10	55.23	11.80	21.4

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Bottineau	10	54.65	20.18	36.9
Benson	10	54.53	18.23	33.4
Sheridan	10	53.70	23.55	43.8
Dunn	8	53.46	23.43	43.8
Slope	5	52.82	23.42	44.3
Billings	5	51.20	9.04	17.7
Stark	8	49.53	14.33	28.9
Mountrail	6	48.63	10.72	22.0
Burke	3	45.47	14.40	31.7
Bowman	6	45.35	16.20	35.7
Hettinger	9	43.71	16.28	37.3
Renville	6	42.80	7.55	17.6
Adams	9	41.96	19.52	46.5

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Figure 29: North Dakota Counties Yield, 2000 to 2009

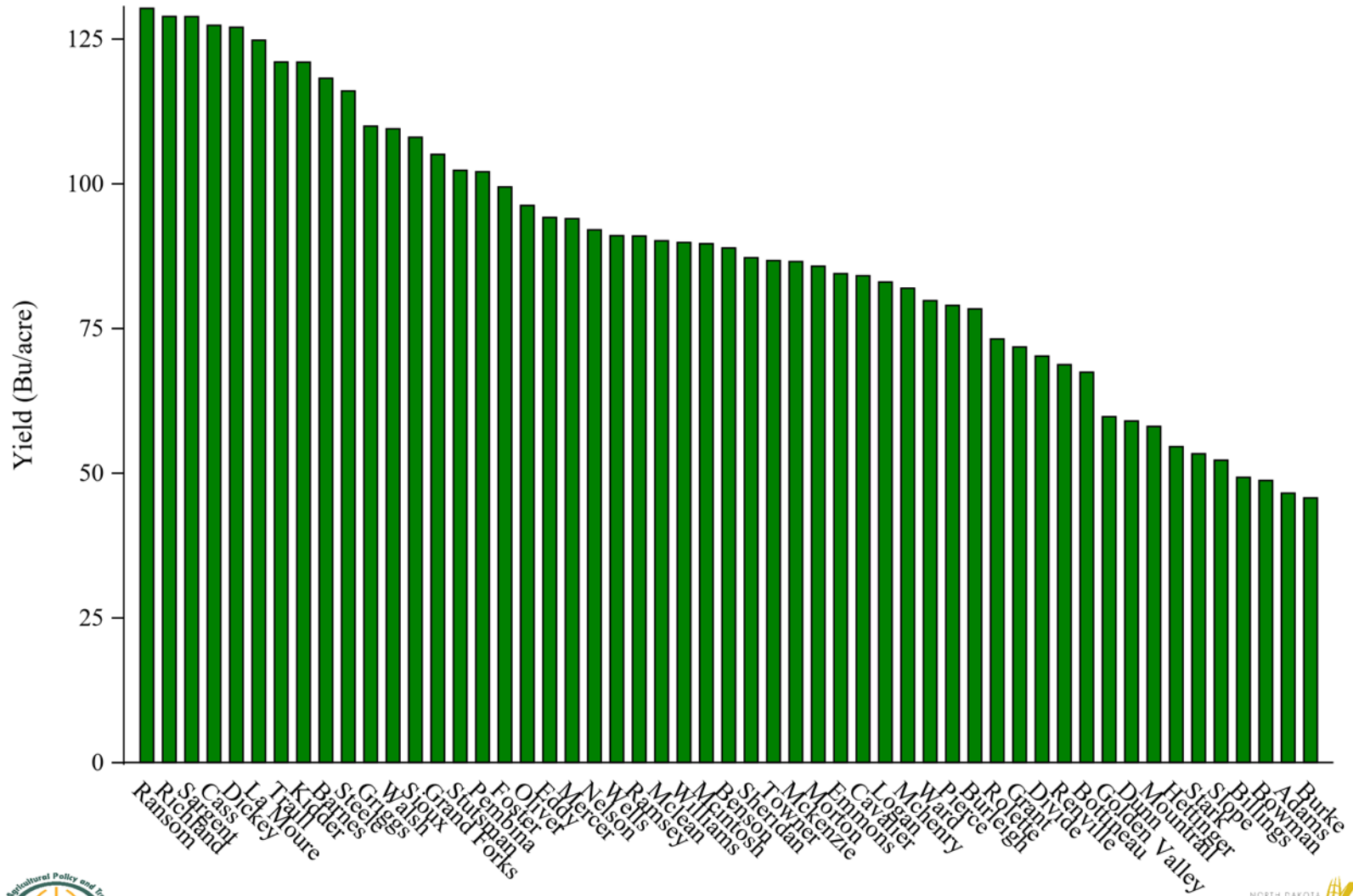


Table 26: North Dakota Counties Yield, Descriptive Statistics for 2000 to 2009

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Ransom	10	130.27	7.40	5.7
Richland	10	128.87	10.09	7.8
Sargent	10	128.85	9.77	7.6
Cass	10	127.34	10.29	8.1
Dickey	10	127.00	10.56	8.3
La Moure	10	124.77	11.09	8.9
Traill	10	121.00	11.87	9.8
Kidder	9	120.98	20.71	17.1
Barnes	10	118.19	15.22	12.9
Steele	10	116.00	12.93	11.2
Griggs	10	109.92	16.68	15.2
Walsh	9	109.47	18.33	16.7
Sioux	3	108.00	19.35	17.9
Grand Forks	10	105.04	19.11	18.2
Stutsman	10	102.28	14.34	14.0
Pembina	9	102.04	23.62	23.1
Foster	9	99.42	19.67	19.8
Oliver	9	96.22	16.65	17.3
Eddy	8	94.15	18.06	19.2

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Mercer	9	93.94	15.94	17.0
Nelson	9	92.01	17.59	19.1
Wells	10	91.00	16.13	17.7
Ramsey	10	90.94	21.34	23.5
Mclean	9	90.12	12.54	13.9
Williams	8	89.84	16.42	18.3
Mcintosh	10	89.61	21.71	24.2
Benson	10	88.88	6.35	7.1
Sheridan	6	87.20	14.62	16.8
Towner	6	86.70	13.09	15.1
Mckenzie	9	86.53	32.66	37.7
Morton	10	85.73	13.82	16.1
Emmons	10	84.44	26.49	31.4
Cavalier	6	84.08	12.40	14.7
Logan	10	83.00	20.04	24.1
Mchenry	9	81.93	13.15	16.0
Ward	9	79.78	9.42	11.8
Pierce	9	78.96	12.02	15.2
Burleigh	9	78.36	19.64	25.1
Rolette	7	73.16	13.16	18.0

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Grant	4	71.78	8.56	11.9
Divide	3	70.20	16.00	22.8
Renville	5	68.72	14.12	20.5
Bottineau	6	67.42	9.00	13.3
Golden Valley	8	59.74	15.73	26.3
Dunn	10	58.99	19.52	33.1
Mountrail	4	58.05	17.18	29.6
Hettinger	9	54.56	16.63	30.5
Stark	9	53.32	15.04	28.2
Slope	6	52.22	7.37	14.1
Billings	5	49.26	14.42	29.3
Bowman	9	48.71	15.77	32.4
Adams	9	46.52	11.87	25.5
Burke	1	45.70	.	.

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Figure 30: North Dakota Counties Yield, 2010 to 2019

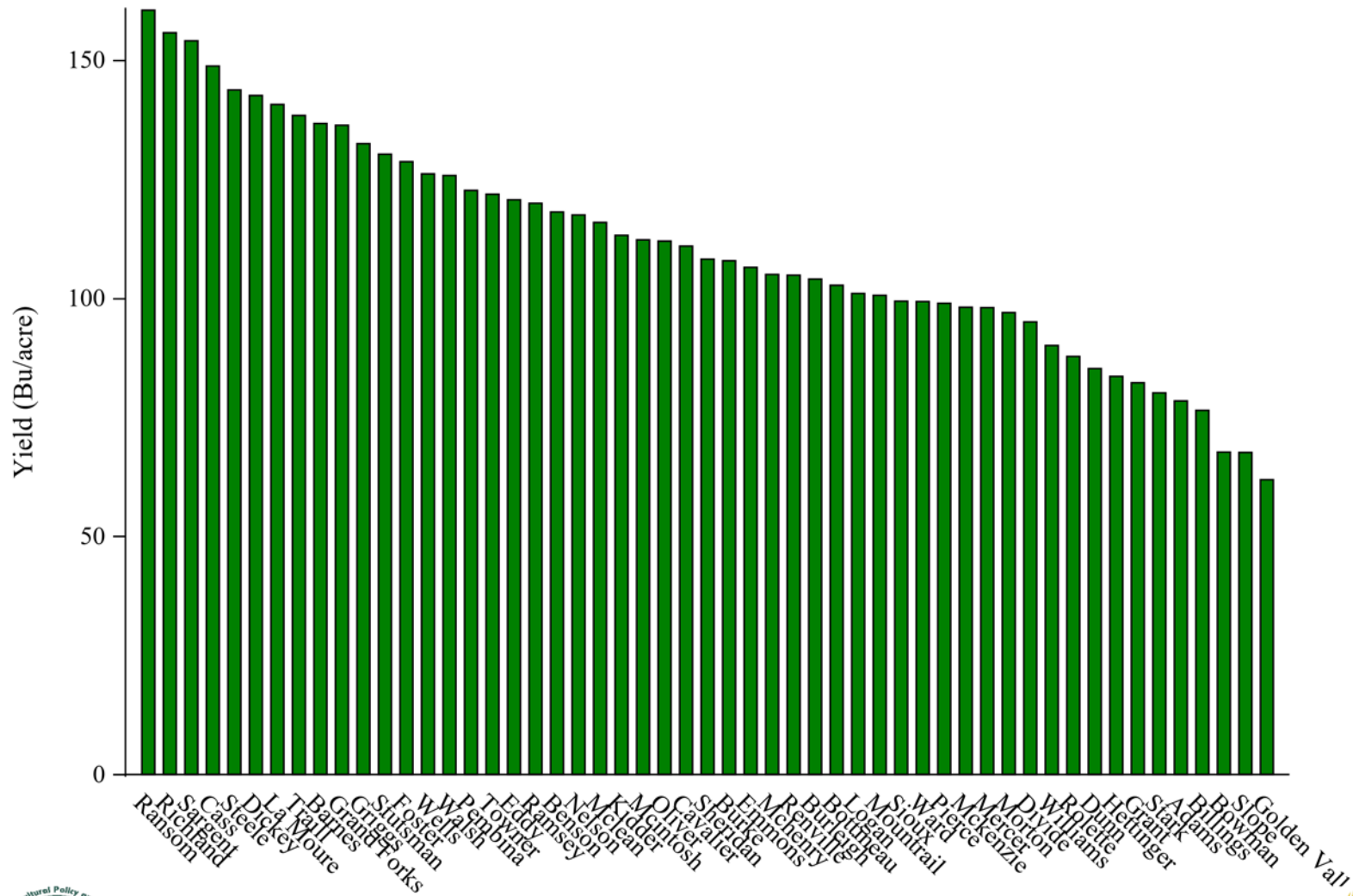


Table 27: North Dakota Counties Yield, Descriptive Statistics for 2010 to 2019

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Ransom	8	160.51	29.08	18.1
Richland	10	155.78	29.65	19.0
Sargent	10	154.08	32.47	21.1
Cass	10	148.78	26.30	17.7
Steele	9	143.77	25.10	17.5
Dickey	8	142.60	23.69	16.6
La Moure	8	140.71	25.50	18.1
Traill	9	138.40	19.31	14.0
Barnes	9	136.71	22.36	16.4
Grand Forks	10	136.35	17.90	13.1
Griggs	7	132.49	18.86	14.2
Stutsman	9	130.27	17.91	13.7
Foster	7	128.70	18.86	14.7
Wells	7	126.14	16.50	13.1
Walsh	9	125.80	16.03	12.7
Pembina	8	122.66	18.10	14.8
Towner	5	121.86	6.76	5.5
Eddy	9	120.70	15.52	12.9
Ramsey	9	119.97	11.89	9.9

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Benson	8	118.14	14.71	12.5
Nelson	9	117.51	11.20	9.5
Mclean	8	115.94	14.87	12.8
Kidder	8	113.24	27.32	24.1
Mcintosh	5	112.28	20.41	18.2
Oliver	6	112.02	15.14	13.5
Cavalier	6	110.97	6.79	6.1
Sheridan	5	108.22	19.35	17.9
Burke	2	107.90	10.75	10.0
Emmons	9	106.51	18.56	17.4
Mchenry	5	105.02	17.68	16.8
Renville	7	104.86	11.87	11.3
Burleigh	9	104.04	14.93	14.3
Bottineau	9	102.74	15.89	15.5
Logan	4	101.03	21.57	21.4
Mountrail	5	100.62	12.67	12.6
Sioux	4	99.40	11.32	11.4
Ward	8	99.33	17.00	17.1
Pierce	4	98.95	6.89	7.0
Mckenzie	5	98.12	21.41	21.8

County	Yield (Bu/acre)			
	N	Mean	Risk	Coefficient of Variation
Mercer	6	98.03	15.93	16.3
Morton	5	97.00	17.58	18.1
Divide	4	95.05	16.25	17.1
Williams	3	90.10	22.06	24.5
Rolette	6	87.80	9.88	11.3
Dunn	6	85.25	8.90	10.4
Hettinger	7	83.61	20.46	24.5
Grant	5	82.26	23.53	28.6
Stark	7	80.14	18.29	22.8
Adams	6	78.45	7.51	9.6
Billings	3	76.47	31.79	41.6
Bowman	4	67.70	10.21	15.1
Slope	6	67.63	20.83	30.8
Golden Valley	5	61.90	18.16	29.3

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Figure 31: Top 5 North Dakota Counties Yield, Annual Trends

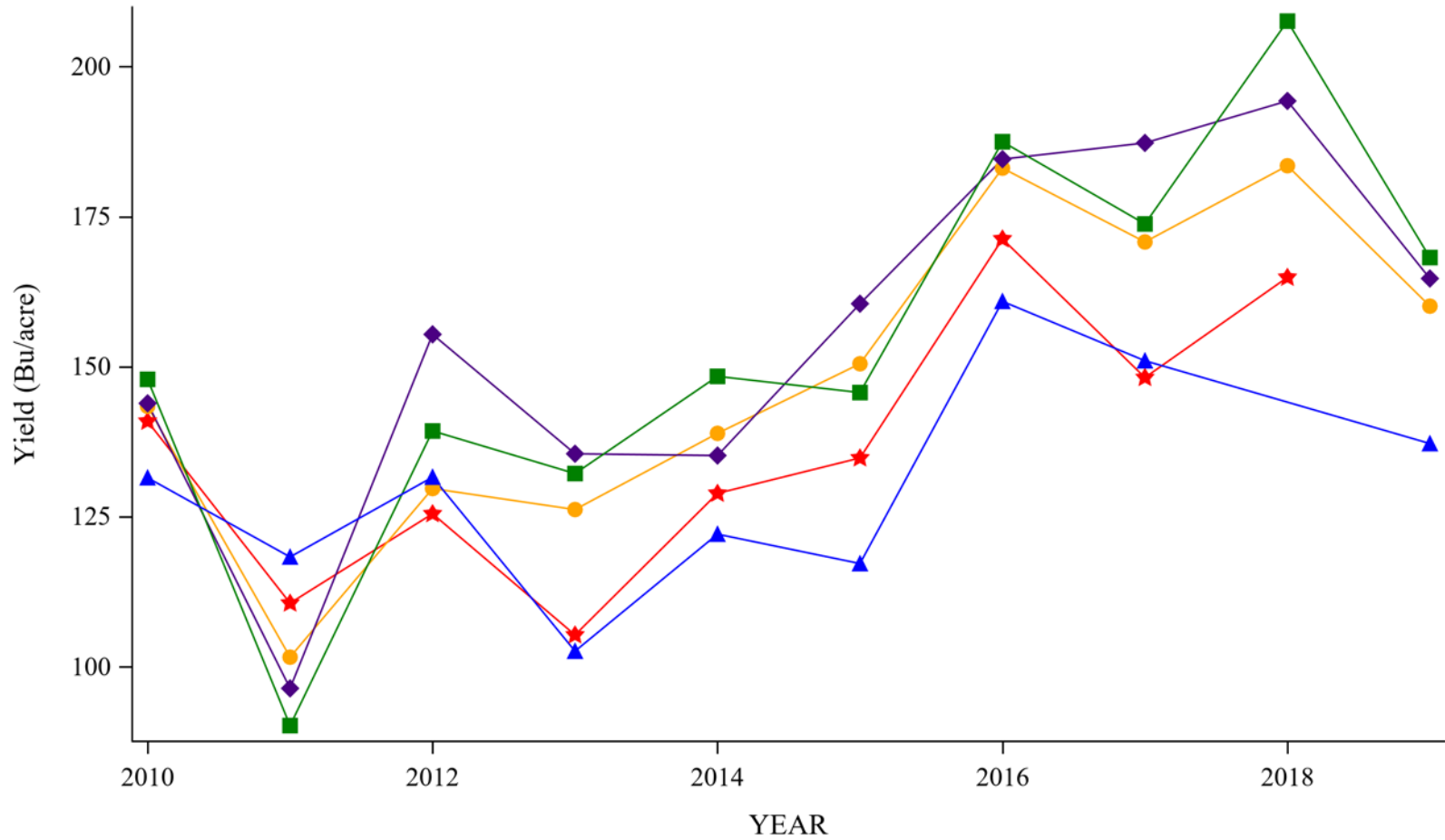
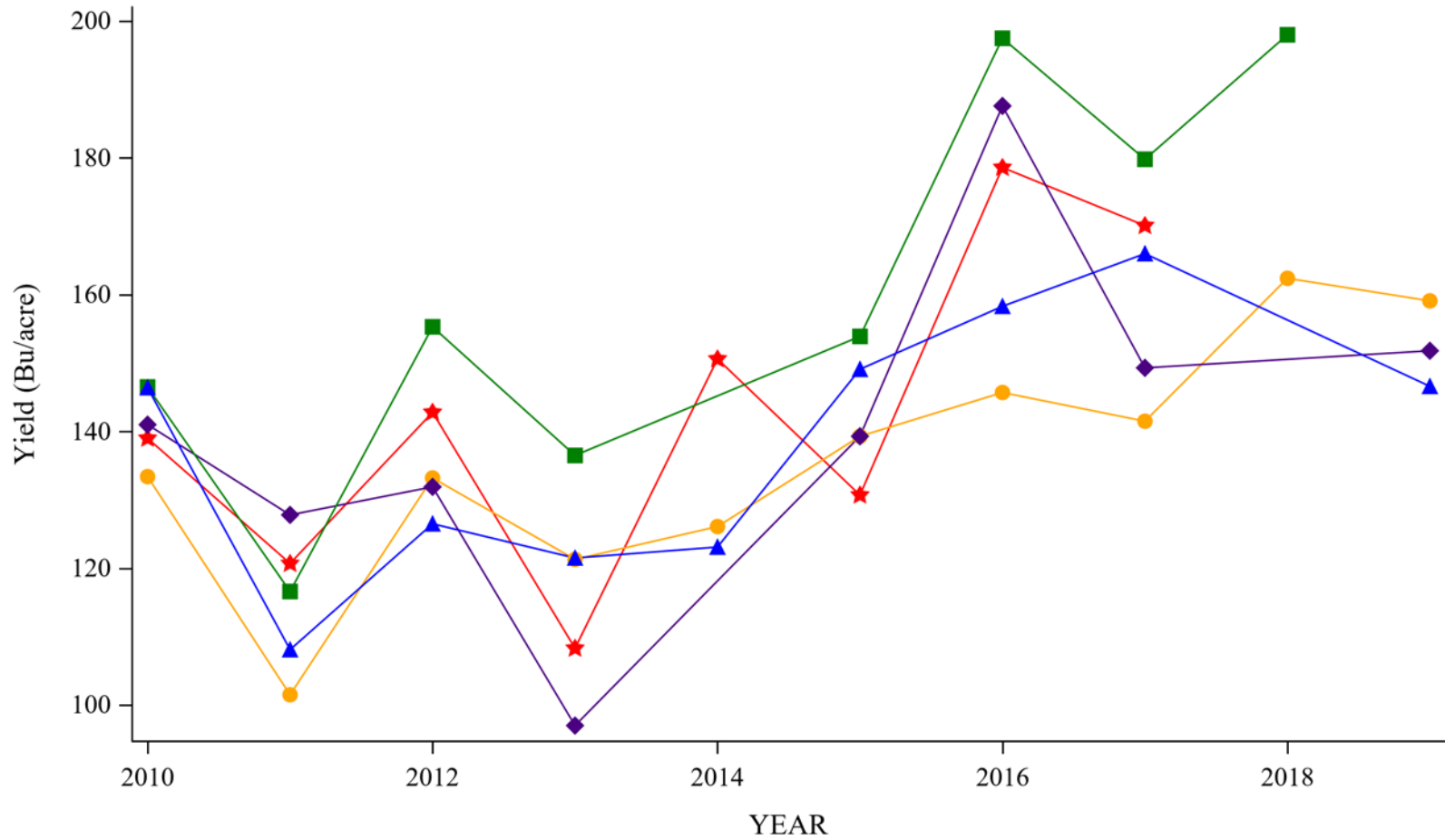


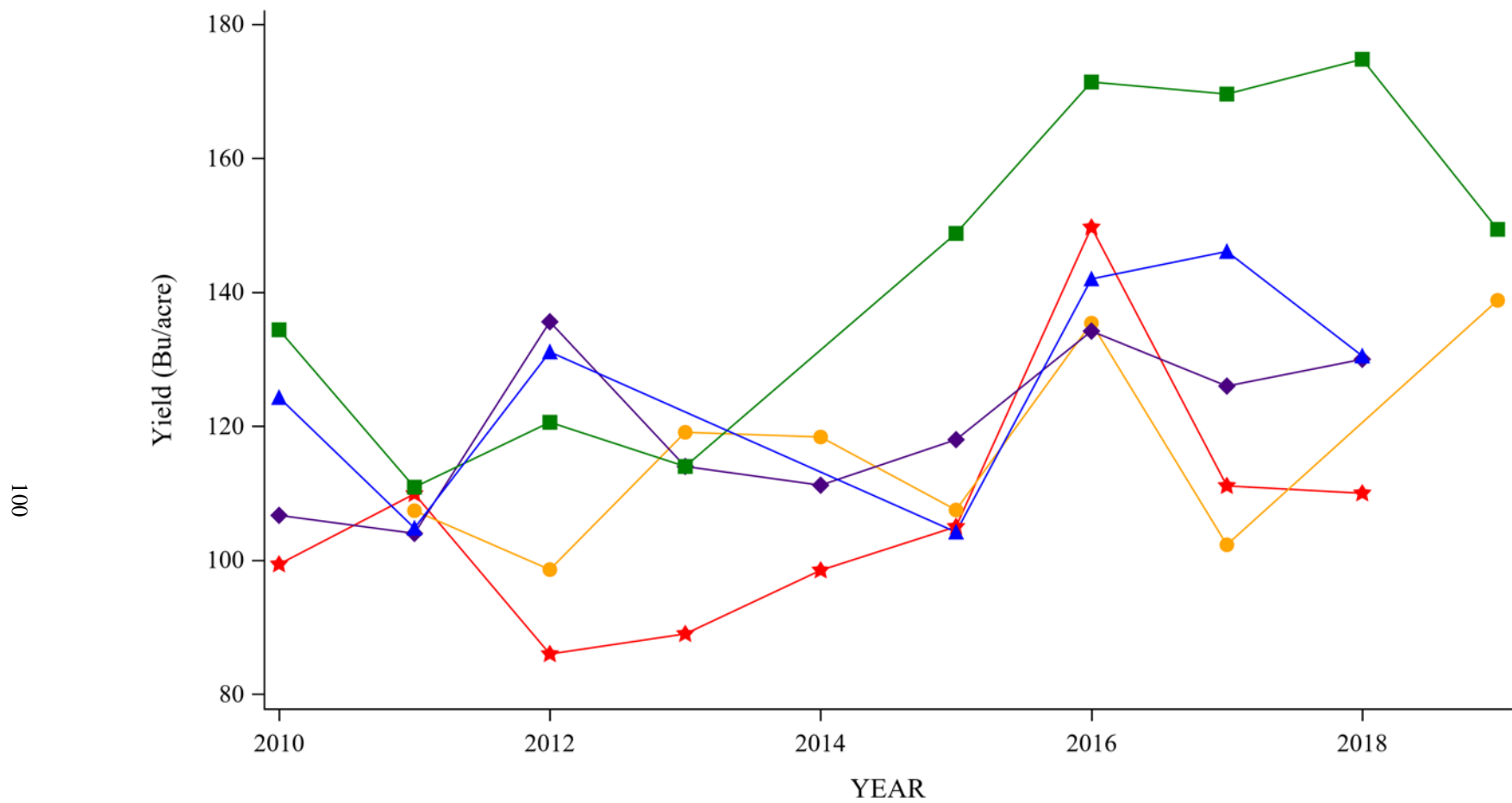
Figure 32: Top 6 to 10 North Dakota Counties Yield, Annual Trends



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Figure 33: Top 11 to 15 North Dakota Counties Yield, Annual Trends



COUNTY_NAME
 Emmons Mclean Ramsey
 Steele Wells

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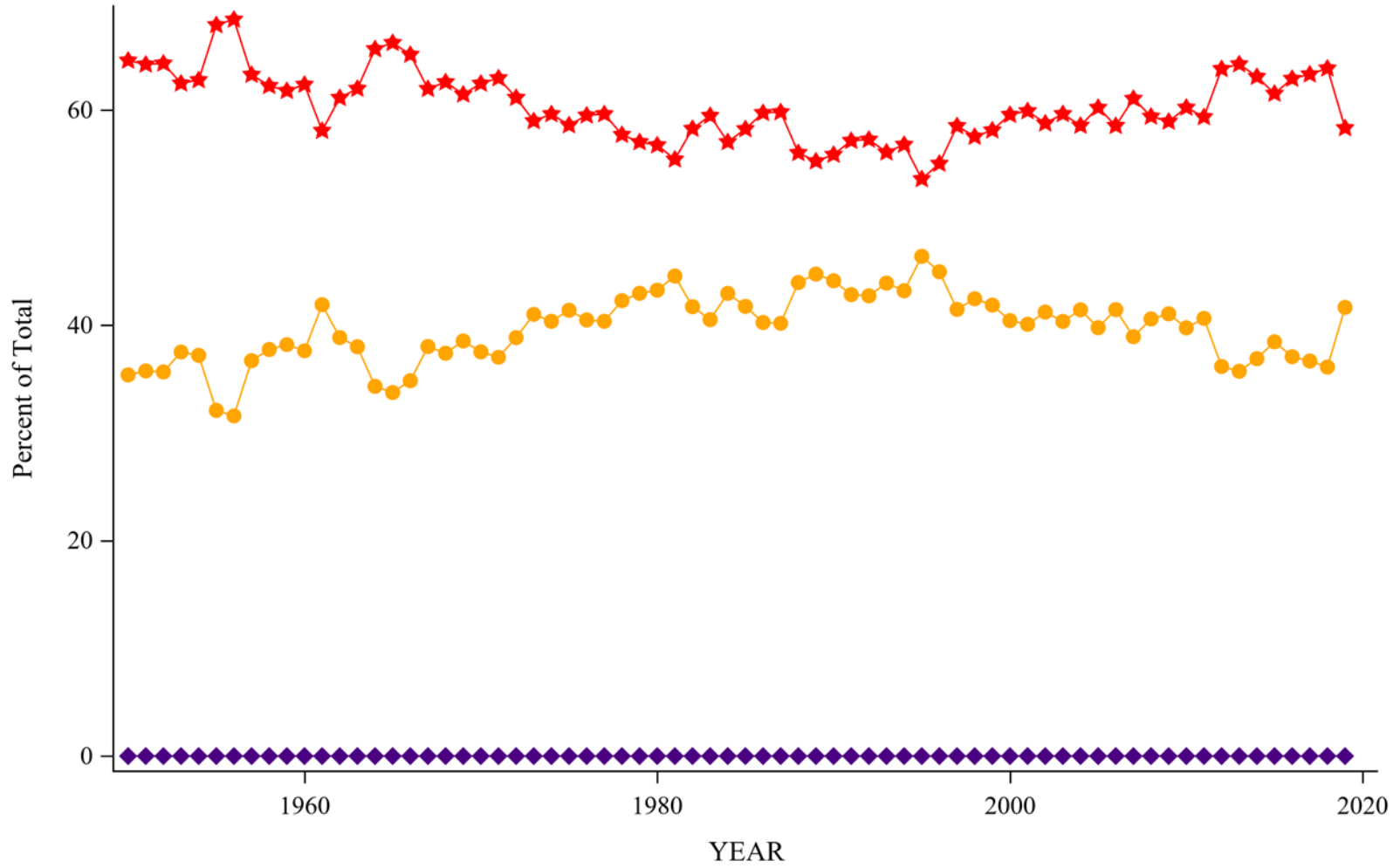


Table 28: Top 15 North Dakota Counties Yield, Annual Trends

County	Yield (Bu/acre)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Richland	143.90	96.40	155.40	135.50	135.20	160.50	184.60	187.30	194.30	164.70
Cass	143.40	101.60	129.70	126.20	138.90	150.50	183.10	170.80	183.50	160.10
Stutsman	131.50	118.30	131.60	102.60	122.10	117.20	160.90	151.00	.	137.20
Sargent	147.90	90.20	139.30	132.20	148.40	145.70	187.50	173.80	207.60	168.20
Barnes	140.90	110.60	125.50	105.30	128.90	134.80	171.30	148.20	164.90	.
Dickey	139.00	120.70	142.80	108.30	150.60	130.70	178.60	170.10	.	.
La Moure	141.00	127.80	131.90	97.00	.	139.30	187.60	149.30	.	151.80
Grand Forks	133.40	101.50	133.20	121.30	126.10	139.30	145.70	141.50	162.40	159.10
Traill	146.40	108.10	126.50	121.50	123.10	149.10	158.30	166.00	.	146.60
Ransom	146.50	116.60	155.30	136.50	.	153.90	197.50	179.80	198.00	.
Steele	134.40	110.90	120.60	114.00	.	148.80	171.40	169.60	174.80	149.40
Emmons	99.40	109.90	86.00	89.00	98.50	105.00	149.70	111.10	110.00	.
Wells	124.30	104.80	131.10	.	.	104.20	142.00	146.10	130.50	.
Mclean	.	107.40	98.60	119.10	118.40	107.50	135.40	102.30	.	138.80
Ramsey	106.70	104.00	135.60	114.00	111.20	118.00	134.20	126.00	130.00	.
Foster	117.60	102.80	141.70	.	110.80	.	152.60	130.00	.	145.40
Benson	117.80	104.50	109.00	103.70	112.70	.	146.60	118.60	132.20	.
Burleigh	101.50	101.00	97.00	81.80	99.70	99.70	.	100.00	123.70	132.00
Walsh	123.10	96.80	129.30	110.00	118.00	138.10	139.50	149.00	128.40	.
Griggs	135.80	108.70	121.00	114.30	.	137.70	160.40	149.50	.	.
Pembina	126.40	87.60	102.60	.	127.30	139.20	136.30	134.80	127.10	.
Eddy	126.60	104.80	127.70	98.50	122.80	107.80	150.50	127.00	120.60	.
Kidder	116.30	120.80	93.90	75.30	108.90	90.90	158.20	.	.	141.60
Nelson	112.20	112.00	114.10	107.20	104.10	117.40	136.80	133.90	119.90	.
Bottineau	87.90	94.20	90.40	110.40	95.90	110.60	138.80	104.00	92.50	.
Mcintosh	114.70	96.50	96.30	.	107.90	.	146.00	.	.	.
Ward	.	77.60	92.10	.	111.10	108.70	130.80	85.90	89.30	99.10
Morton	101.10	76.90	86.90	.	.	96.40	123.70	.	.	.
Mchenry	103.80	92.60	88.90	.	.	105.90	133.90	.	.	.
Hettinger	.	79.30	67.00	106.60	94.10	.	93.50	47.60	.	97.20
Grant	92.30	86.10	79.60	.	.	.	108.50	44.80	.	.
Logan	96.20	98.70	78.70	.	.	.	130.50	.	.	.
Stark	87.70	94.00	61.40	95.40	.	71.70	98.40	52.40	.	.

County	Yield (Bu/acre)									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Oliver	117.90	113.40	100.50	110.20	.	93.20	136.90	.	.	.
Mercer	92.20	97.30	74.70	108.20	.	.	121.90	.	93.90	.
Adams	.	75.80	69.80	90.70	76.60	.	74.10	.	83.70	.
Sheridan	97.60	90.10	100.40	.	.	.	139.30	.	.	113.70
Pierce	107.60	91.10	96.90	.	.	100.20	.	.	.	.
Towner	127.10	.	131.00	.	116.00	116.80	.	118.40	.	.
Dunn	75.30	79.50	.	94.00	89.50	.	95.70	.	77.50	.
Renville	104.70	.	84.30	108.70	113.10	107.70	120.30	95.20	.	.
Sioux	92.90	107.30	86.90	110.50	.	.	.	.	.	.
Cavalier	114.20	.	103.00	.	104.50	107.90	.	116.80	.	119.40
Slope	89.60	.	50.40	.	.	76.10	57.80	41.30	.	90.60
Rolette	81.90	83.50	74.40	.	97.80	.	.	89.00	.	100.20
Bowman	80.30	63.70	56.30	.	.	.	.	.	70.50	.
Golden Valley	76.10	59.00	.	.	.	62.70	78.60	33.10	.	.
Mountrail	.	84.20	.	.	104.50	91.90	.	.	106.00	116.50
Mckenzie	.	128.30	.	101.90	71.70	.	84.80	.	.	103.90
Divide	110.90	.	78.30	106.90	.	.	84.10	.	.	.
Williams	.	.	114.60	.	83.90	71.80	.	.	.	.
Billings	41.00	.	.	.	86.00	.	.	.	.	102.40
Burke	115.50	.	100.30	.

Figure 34: State Level Variance Decomposition of Harvested Acreage



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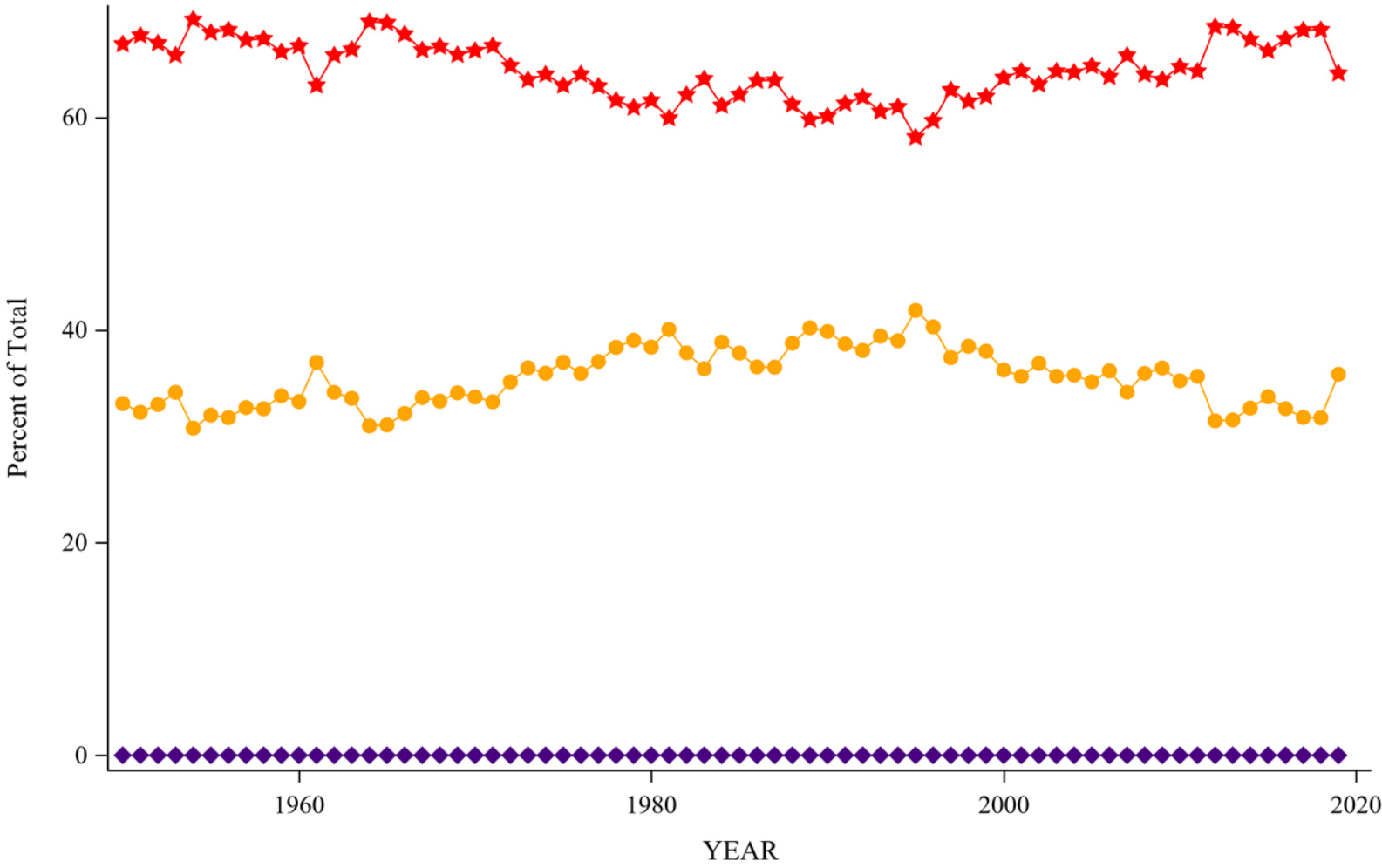


Variance Source —★— Region —●— State —◆— Unexplained

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Figure 35: State Level Variance Decomposition of Planted Acreage



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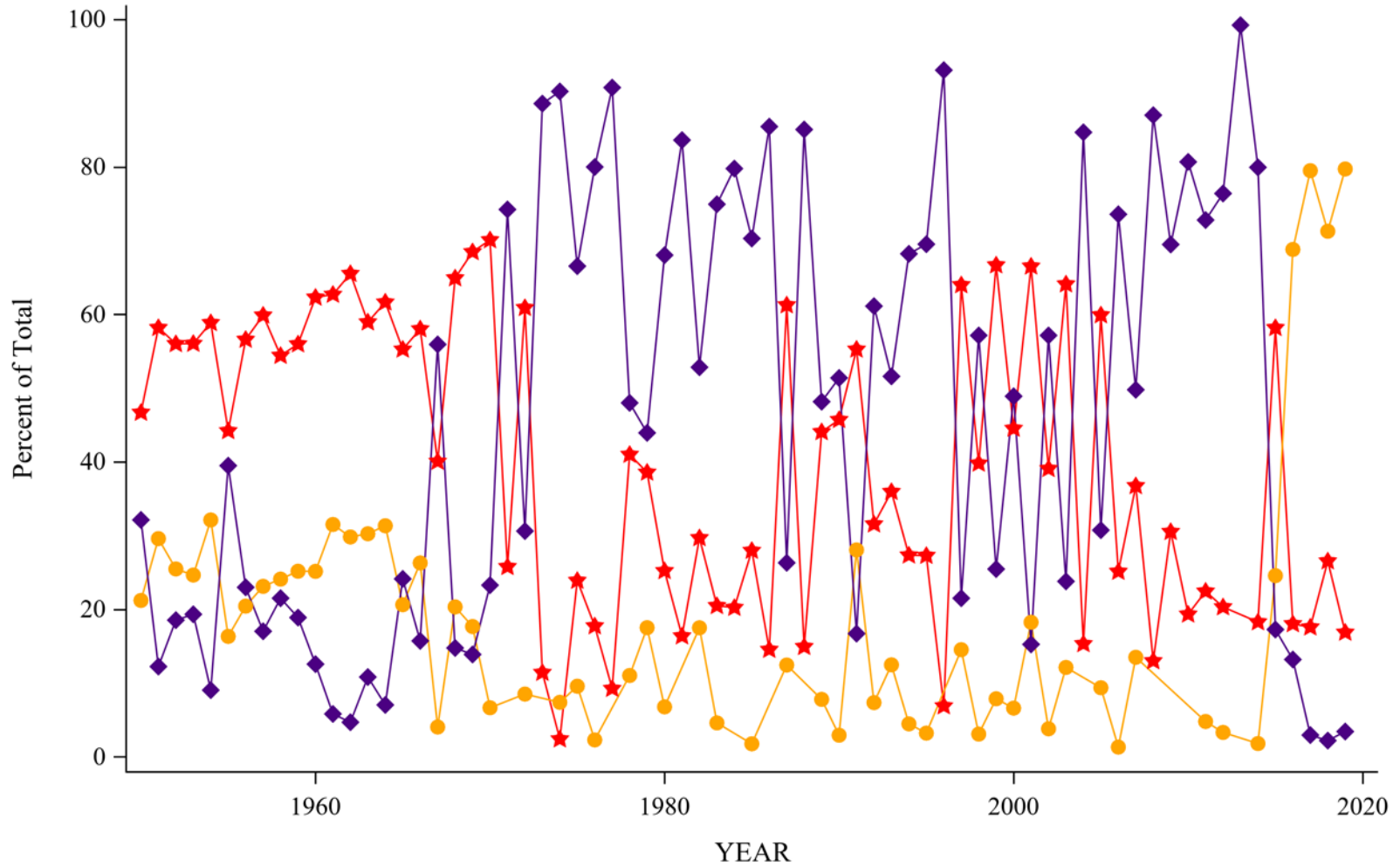


Variance Source ★ Region ● State ◆ Unexplained

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Figure 36: State Level Variance Decomposition of Price



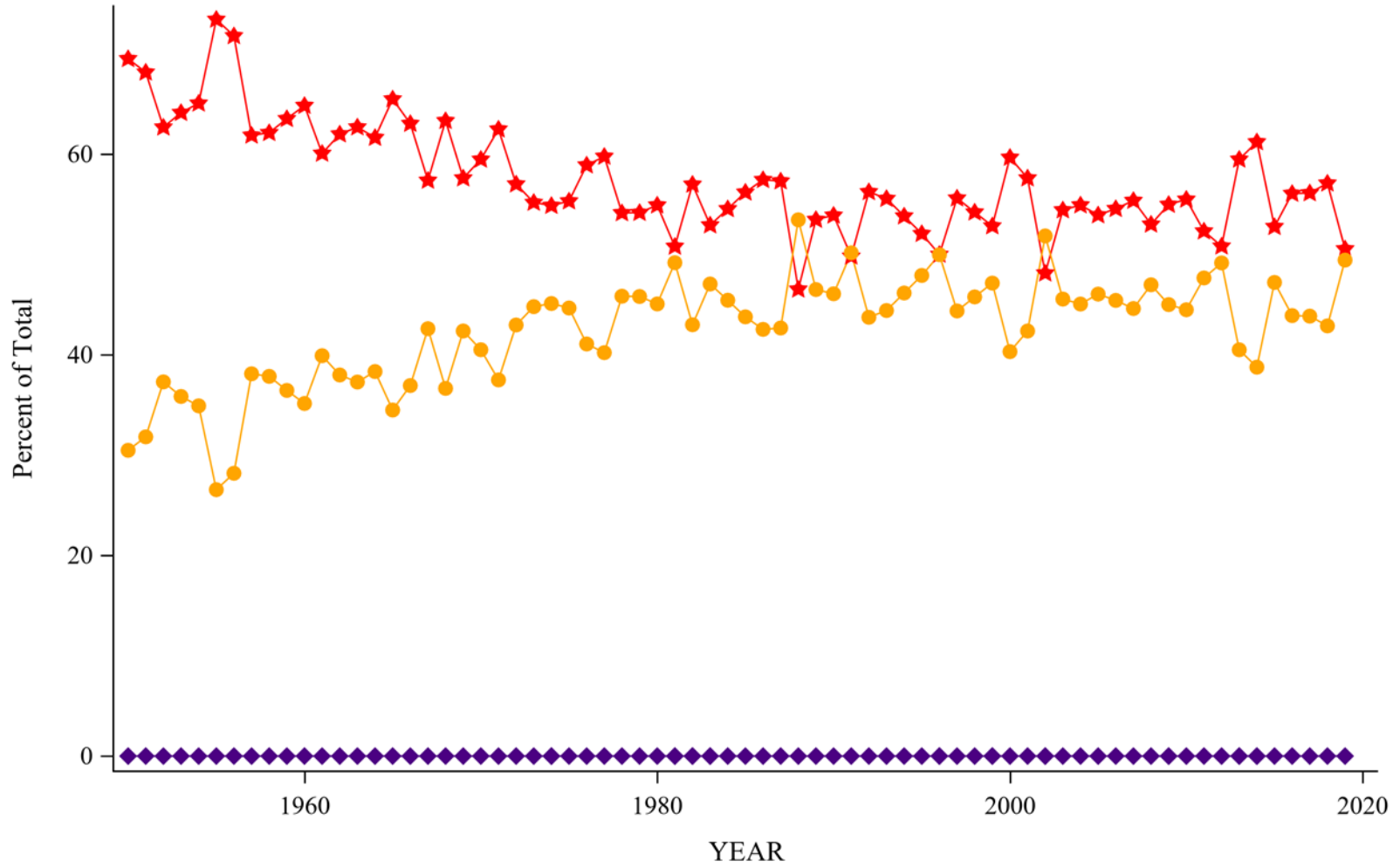
105

Variance Source —★— Region —●— State —◆— Unexplained

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Figure 37: State Level Variance Decomposition of Production



901

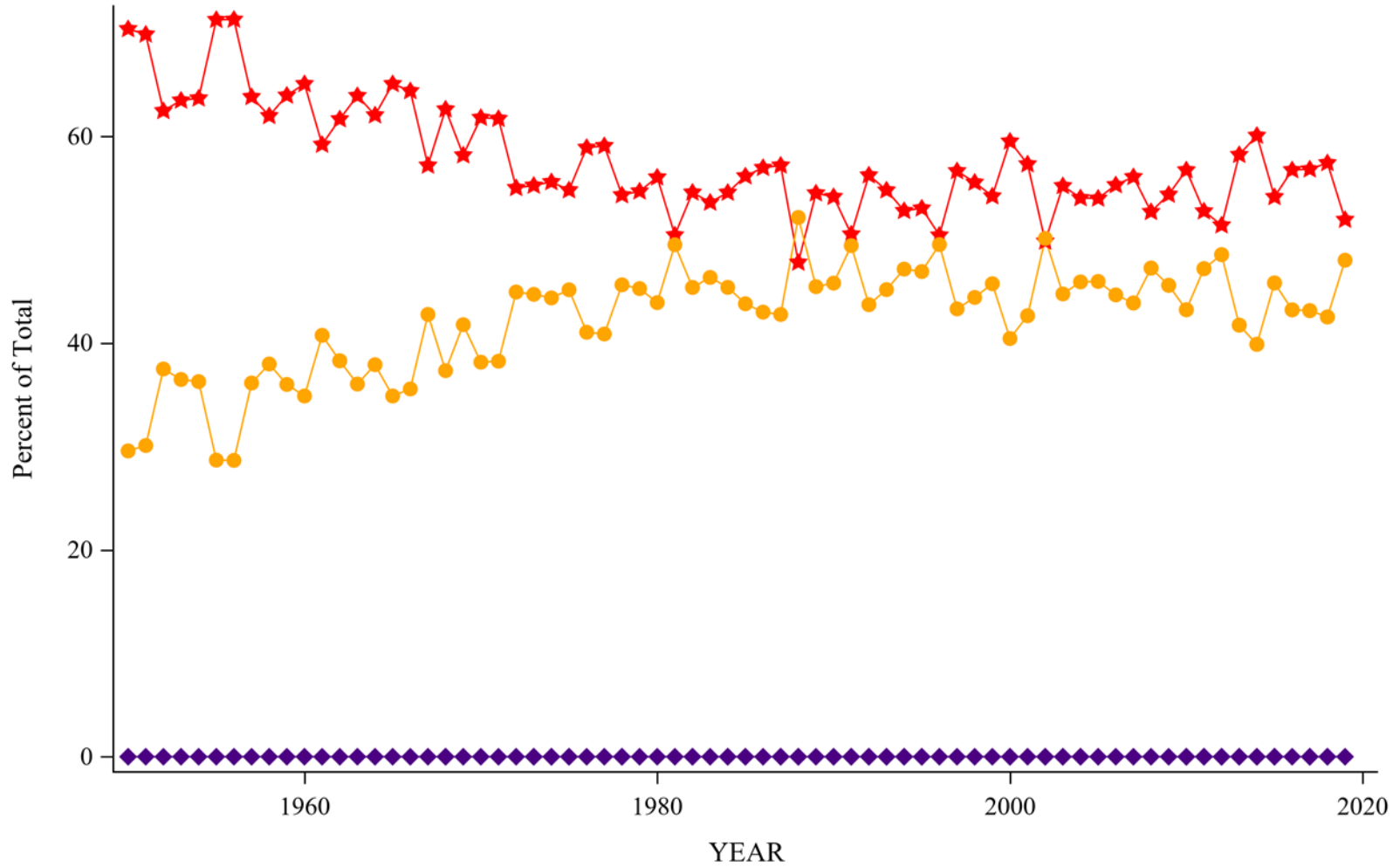


Variance Source ★ Region ● State ◆ Unexplained

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Figure 38: State Level Variance Decomposition of Revenue



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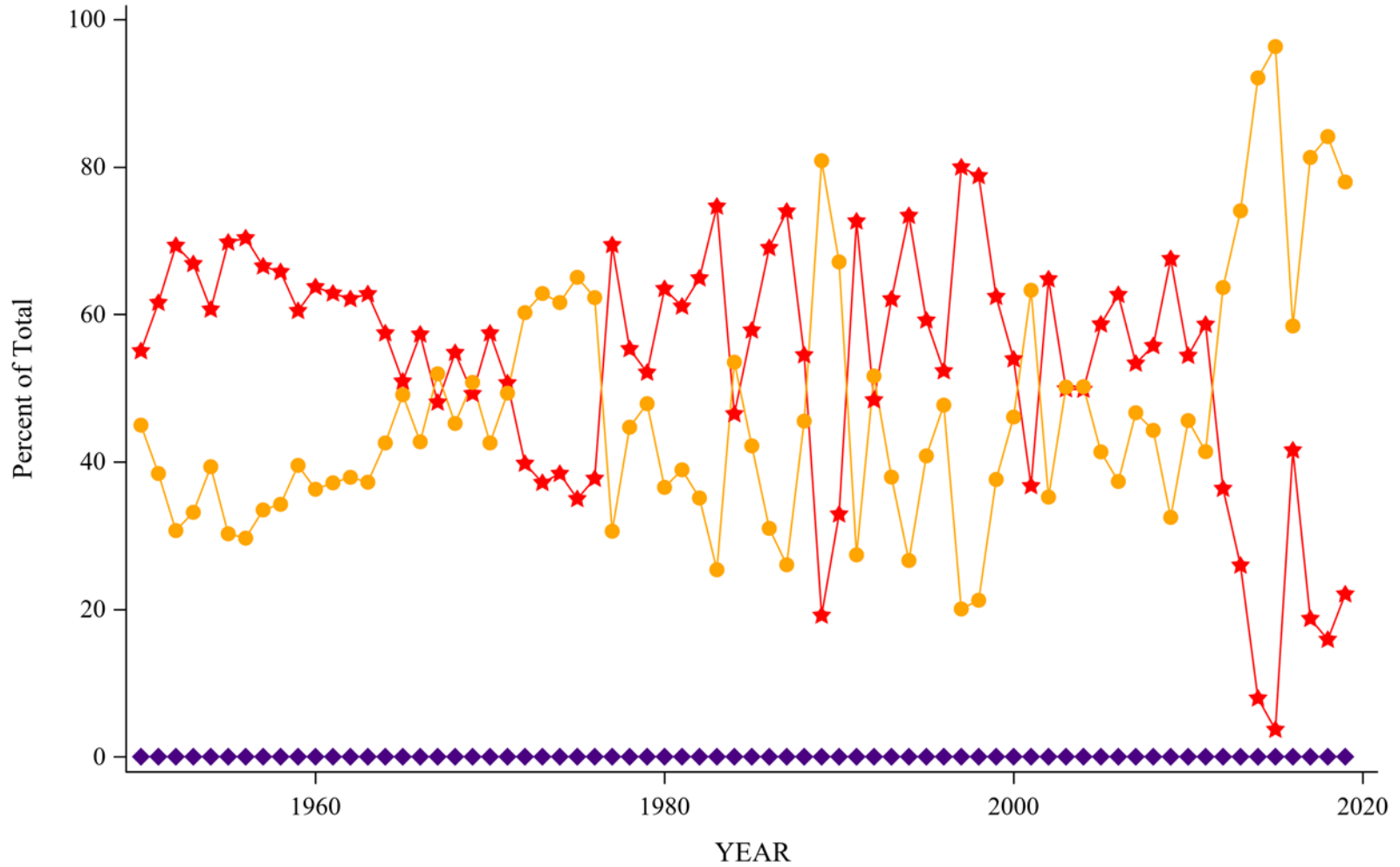


Variance Source —★— Region —●— State —◆— Unexplained

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Figure 39: State Level Variance Decomposition of Yield



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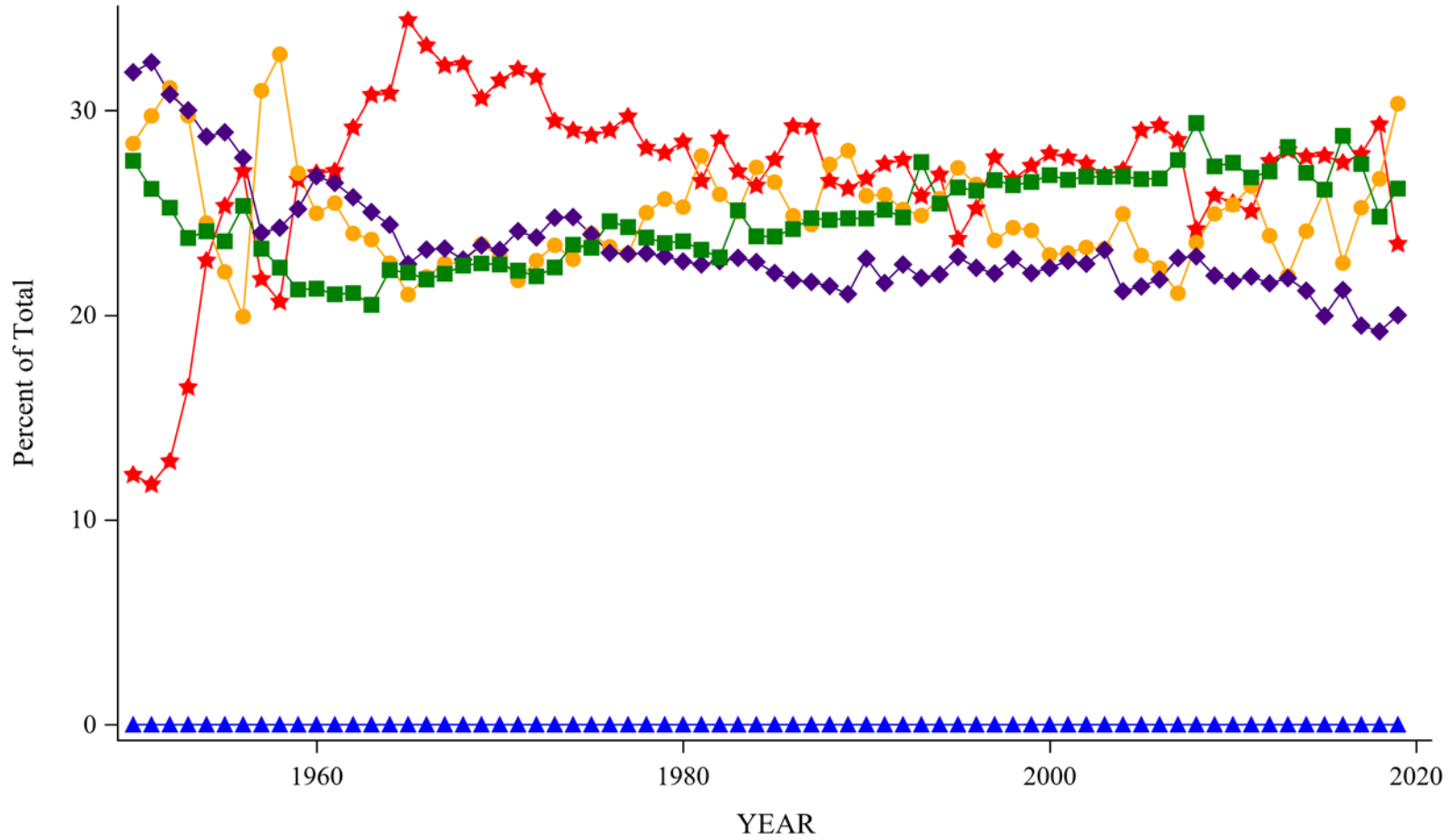


Variance Source —★— Region —●— State —◆— Unexplained

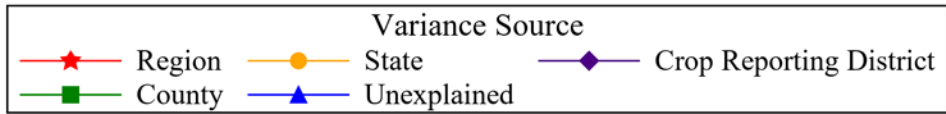
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Figure 40: County Level Variance Decomposition of Harvested Acreage



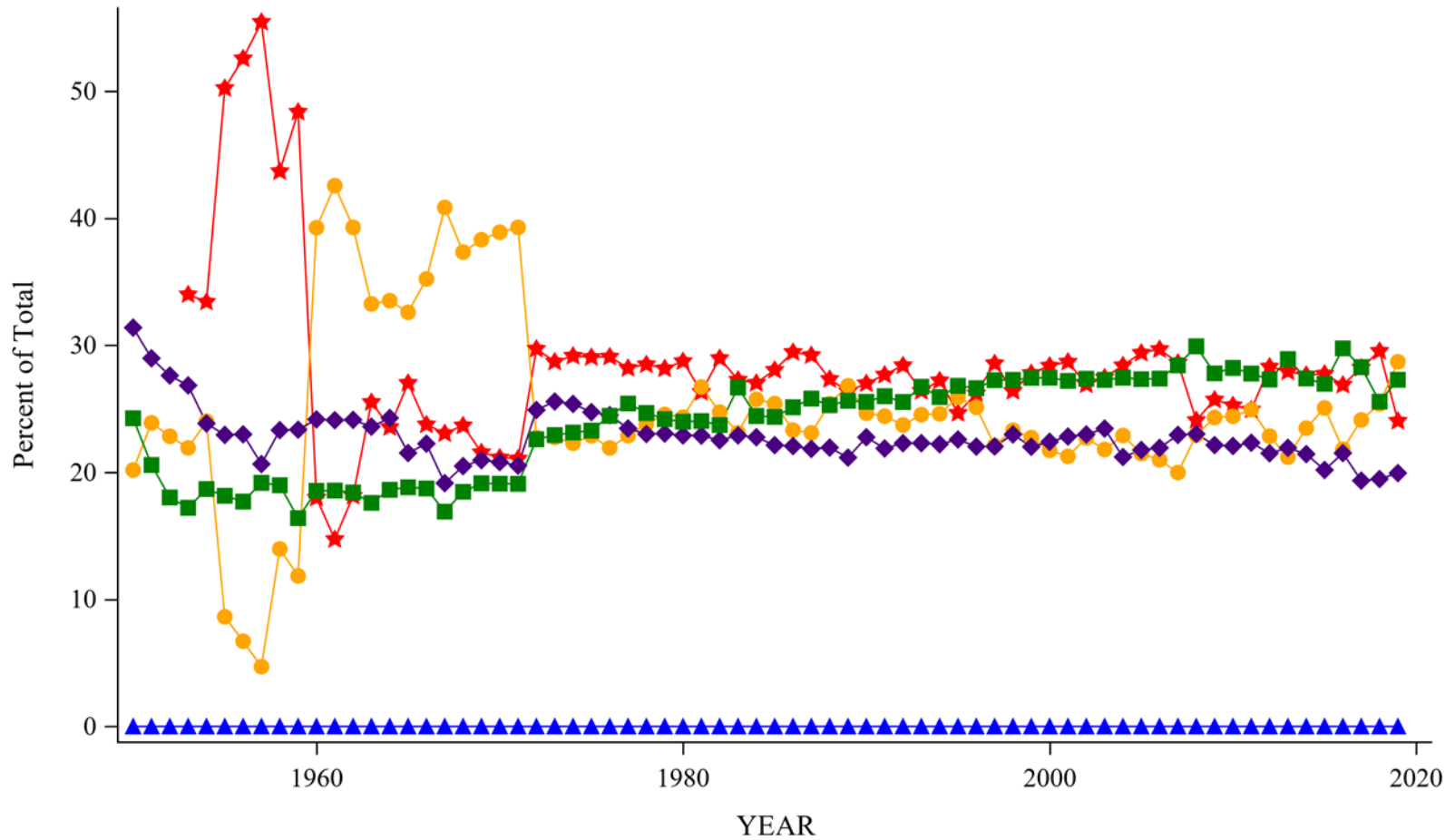
601



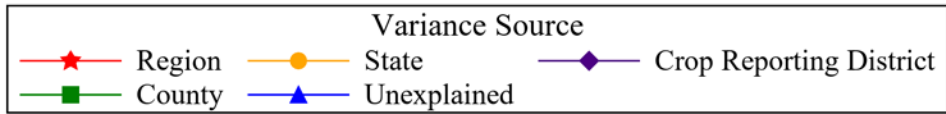
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Figure 41: County Level Variance Decomposition of Planted Acreage



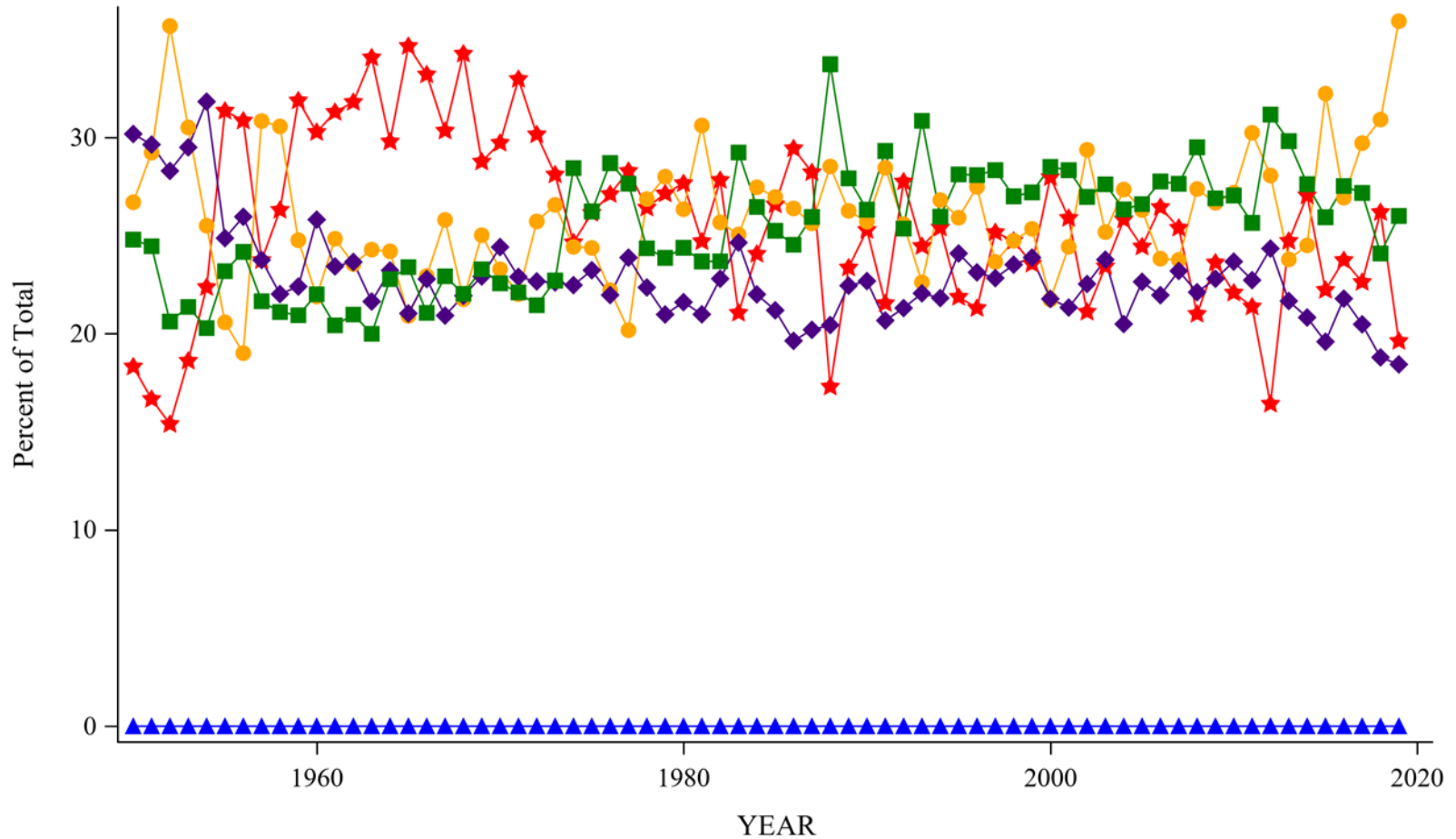
110



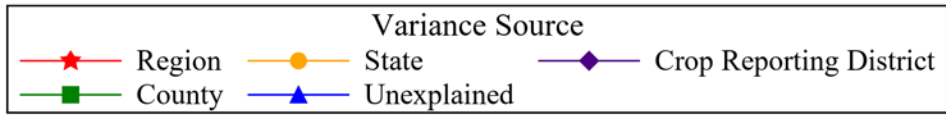
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Figure 42: County Level Variance Decomposition of Production



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