Corn

Basis Minneapolis (net profit/loss per bushel compared to harvest)

			Store cash at harvest and		Sell cash at harvest and Buy July call option ...				
	Use commercial storage	Store cash corn on farm	Buy July put	Sell July futures	1 strike in money	At the money	1 strike out of money	2 strikes out of money	Buy July futures
1985	-$0.14	-$0.01	-$0.05	$0.09	-$0.20	-$0.16	-$0.12	-$0.09	-$0.14
1986	$0.02	$0.15	$0.04	$0.17	-$0.14	-$0.16	-$0.12	-$0.09	-$0.06
1987	$0.81	$0.94	$0.73	-$0.03	$0.83	$0.78	$0.71	$0.64	$0.93
1988	-$0.63	-$0.50	-$0.37	-$0.16	-$0.28	-$0.22	-$0.19	-$0.15	-$0.38
1989	$0.06	$0.19	-$0.01	-$0.10	$0.12	$0.06	-$0.01	-$0.07	$0.25
1990	-$0.16	-$0.03	-$0.10	$0.06	-$0.22	-$0.18	-$0.15	-$0.12	-$0.13
1991	-$0.16	-$0.03	-$0.03	$0.13	-$0.23	-$0.19	-$0.15	-$0.12	-$0.20
1992	-$0.24	-$0.11	-$0.09	$0.05	-$0.22	-$0.16	-$0.12	-$0.09	-$0.20
1993	$0.20	$0.33	$0.16	$0.06	$0.13	$0.07	$0.01	-$0.06	$0.23
1994	$0.38	$0.51	$0.35	$0.07	$0.31	$0.25	$0.19	$0.11	$0.40
1995	$1.61	$1.74	$1.52	$0.16	$1.40	$1.35	$1.28	$1.20	$1.54
1996	-$0.66	-$0.53	-$0.31	-$0.15	-$0.23	-$0.19	-$0.16	-$0.13	-$0.43
1997	-$0.36	-$0.23	-$0.25	$0.04	-$0.23	-$0.19	-$0.16	-$0.14	-$0.31
1998	$0.08	$0.21	$0.17	$0.30	-$0.25	-$0.20	-$0.16	-$0.13	-$0.14
1999	-$0.13	$0.00	$0.12	$0.25	-$0.19	-$0.15	-$0.11	-$0.09	-$0.29
2000	-$0.42	-$0.29	-$0.06	$0.12	-$0.24	-$0.20	-$0.16	-$0.13	-$0.44
2001	-$0.02	$0.11	$0.24	$0.35	-$0.20	-$0.16	-$0.12	-$0.10	-$0.28
2002	-$0.34	-$0.21	-$0.20	-$0.01	-$0.25	-$0.21	-$0.17	-$0.14	-$0.24
2003	$0.38	$0.51	$0.31	$0.13	$0.21	$0.16	$0.09	$0.02	$0.34
2004	$0.07	$0.20	$0.03	$0.17	-$0.11	-$0.16	-$0.15	-$0.12	-$0.01
2005	$0.09	$0.22	$0.06	$0.20	-$0.11	-$0.16	-$0.15	-$0.13	-$0.02
2006	$1.00	$1.13	$0.86	$0.46	$0.44	$0.38	$0.32	$0.25	$0.63
2007	$3.08	$3.29	$2.88	-$0.13	$3.49	$2.93	$2.87	$2.80	$3.39
2008	-$1.05	-$0.62	$0.18	$0.75	-$0.63	-$0.60	-$0.56	-$0.49	-$1.41
2009	-$0.71	-$0.37	-$0.31	$0.08	-$0.46	-$0.42	-$0.38	-$0.35	-$0.49
2010	$1.53	$1.87	$1.25	$0.24	$1.04	$0.98	$0.92	$0.86	$1.59
2011	-$0.42	-$0.08	-$0.37	$0.30	-$0.74	-$0.69	-$0.65	-$0.61	-$0.42
2012	-$0.62	-$0.28	-$0.11	$0.54	-$0.72	-$0.68	-$0.64	-$0.60	-$0.86
2013	-$0.74	-$0.40	-$0.63	-$0.28	-$0.41	-$0.37	-$0.32	-$0.29	-$0.16
2014	-$0.05	$0.29	$0.04	$0.01	$0.06	$0.01	-$0.05	-$0.12	$0.24
2015	-$0.36	-$0.02	-$0.14	$0.17	-$0.38	-$0.34	-$0.30	-$0.26	-$0.23
2016	-$0.23	$0.11	-$0.16	$0.12	-$0.26	-$0.30	-$0.34	-$0.23	-$0.05
2017	-$0.05	$0.29	$0.11	$0.22	-$0.16	-$0.21	-$0.23	-$0.19	$0.03
2018	$0.36	$0.70	$0.48	$0.08	$0.42	$0.36	$0.30	$0.23	$0.58
2019	-$0.83	-$0.49	$0.05	$0.31	-$0.28	-$0.24	-$0.20	-$0.17	-$0.84
1985-19 Ave.	$0.04	$0.25	$0.18	$0.14	$0.04	$0.02	$0.02	$0.03	$0.07
Risk	80%	78%	64%	20%	75%	66%	63%	60%	82%
Years profitable	40%	54%	54%	80%	31%	31%	26%	23%	34%
2001-2019 Ave.	$0.06	$0.33	$0.24	$0.20	$0.05	$0.02	$0.01	$0.02	$0.09

Soybeans

Basis Minneapolis (net profit/loss per bushel compared to harvest)

			Store cash at harvest and		Sell cash at harvest and Buy July call option ...				
	Use commercial storage	Store cash soybeans on farm	Buy July put	Sell July futures	1 strike in money	At the money	1 strike out of money	2 strikes out of money	Buy July futures
1985	-$0.10	$0.03	-$0.07	$0.18	-$0.35	-$0.29	-$0.19	-$0.13	-$0.19
1986	$0.39	$0.52	$0.25	-$0.08	$0.46	$0.35	$0.22	$0.03	$0.55
1987	$3.34	$3.47	$3.08	-$0.29	$3.45	$3.30	$3.14	$2.96	$3.72
1988	-$1.55	-$1.42	-$1.04	-$0.48	-$0.72	-$0.62	-$0.52	-$0.45	-$0.98
1989	-$0.19	-$0.06	-$0.37	-$0.01	-$0.32	-$0.42	-$0.37	-$0.30	-$0.09
1990	-$0.80	-$0.67	-$0.18	$0.20	-$0.56	-$0.42	-$0.34	-$0.27	-$0.91
1991	-$0.03	$0.10	-$0.15	$0.17	-$0.44	-$0.39	-$0.33	-$0.27	-$0.12
1992	$0.37	$0.50	$0.28	$0.08	$0.29	$0.17	$0.01	-$0.15	$0.38
1993	$0.54	$0.67	$0.40	-$0.06	$0.55	$0.41	$0.26	$0.06	$0.68
1994	$0.27	$0.40	$0.06	$0.05	$0.13	-$0.01	-$0.14	-$0.15	$0.32
1995	$1.16	$1.29	$0.84	$0.15	$0.82	$0.67	$0.49	$0.30	$1.10
1996	$0.51	$0.64	$0.19	-$0.18	$0.51	$0.38	$0.22	$0.03	$0.78
1997	-$0.41	-$0.28	-$0.62	-$0.22	-$0.41	-$0.48	-$0.40	-$0.33	-$0.11
1998	-$0.72	-$0.59	-$0.16	$0.20	-$0.53	-$0.38	-$0.28	-$0.22	-$0.83
1999	$0.13	$0.26	$0.01	$0.40	-$0.52	-$0.40	-$0.32	-$0.25	-$0.18
2000	-$0.56	-$0.43	-$0.18	$0.17	-$0.49	-$0.40	-$0.34	-$0.28	-$0.65
2001	$0.18	$0.31	-$0.06	$0.14	-$0.09	-$0.21	-$0.22	-$0.18	$0.13
2002	$0.63	$0.76	$0.40	-$0.07	$0.60	$0.49	$0.36	$0.22	$0.79
2003	$2.22	$2.35	$1.96	-$0.38	$2.32	$2.23	$2.12	$1.99	$2.69
2004	$1.68	$1.81	$1.30	$0.06	$1.31	$1.21	$1.08	$0.95	$1.71
2005	$0.00	$0.13	-$0.24	$0.18	-$0.48	-$0.44	-$0.37	-$0.31	-$0.09
2006	$1.95	$2.08	$1.78	-$0.24	$2.01	$1.91	$1.48	$1.67	$2.28
2007	$5.29	$5.53	$4.72	-$0.11	$4.85	$4.74	$4.62	$4.50	$5.60
2008	-$0.20	$0.26	-$1.11	-$0.56	-$0.52	-$0.64	-$0.75	-$0.87	$0.78
2009	-$0.40	$0.06	-$0.80	-$0.35	-$0.41	-$0.52	-$0.63	-$0.70	$0.37
2010	$2.24	$2.69	$1.73	$0.49	$1.43	$1.31	$1.18	$1.04	$2.16
2011	$2.43	$2.88	$1.96	$0.45	$1.55	$1.45	$1.34	$1.22	$2.39
2012	-$0.62	-$0.16	-$1.17	-$0.69	-$0.43	-$0.55	-$0.67	-$0.79	$0.48
2013	$0.38	$0.84	$0.13	-$1.10	$1.26	$1.17	$1.06	$0.97	$1.90
2014	$0.12	$0.58	$0.00	$0.18	-$0.15	-$0.25	-$0.35	-$0.47	$0.35
2015	$1.76	$2.21	$1.71	-$0.09	$1.84	$1.74	$1.64	$1.52	$2.27
2016	-$1.09	-$0.64	-$0.73	-$0.06	-$0.73	-$0.64	-$0.55	-$0.48	-$0.62
2017	-$1.15	-$0.69	$0.00	$0.53	-$0.68	-$0.59	-$0.50	-$0.43	-$1.26
2018	$0.03	$0.48	$0.09	$0.56	-$0.52	-$0.47	-$0.40	-$0.34	-$0.12
2019	-$0.81	-$0.35	-$0.06	$0.43	-$0.70	-$0.57	-$0.47	-$0.40	-$0.82
1985-19 Ave.	$0.48	$0.73	$0.40	-$0.01	$0.41	$0.37	$0.32	$0.28	$0.70
Risk	140%	140%	123%	36%	129%	124%	117%	113%	146%
Years profitable	60%	71%	54%	51%	46%	43%	43%	40%	60%
2001-2019 Ave.	$0.77	$1.11	$0.61	-$0.03	$0.65	$0.60	$0.52	$0.48	$1.11

The tables show the results of different storage strategies during the 1985-2019 crop years. On-farm storage includes interest charge on stored grain using prevailing operating and CCC loan rates.
Handling charges are 1 to 2 cents per month for on-farm storage, 2.5 to 5 cents cents per month for commercial storage.
Figures do not include loan deficiency payments, if any, or depreciation on bins and equipment.
Risk is the unpredictability of returns -- the higher the risk number, in general the greater both the gains and losses from a strategy may be.
All positions are initiated in first week of October and liquidated upon expiration of July options for corn and soybeans. Brokerage commissions and slippage figured at $100 per round trip, or two cents per bushel.
Futures and options results are based on official Chicago Board of Trade settlement prices; results were estimated for a few dates when trades did not take place
using a widely followed options model. However, all results are hypothetical, not the result of actual trades. Moreover, past performance of a strategy is no guarantee of future results.

Glossary:

Call options convey the right, but not the obligation to purchase a futures contract, in exchange for a premium paid in advance.
Put options convey the right, but not the obligation to sell a futures contract, in exchange for a premium paid in advance.

At the money calls convey the right to buy futures for about the price they're trading.
At the money puts convey the right to sell futures for about the price they're trading.

In the money calls convey the right to buy futures for less than they're trading.
Out of the money calls convey the right to buy futures for more than they're trading.