## Corn 1985-2018

First number is weighted advantage/disadvantage per acre compared to harvest cash price; second price is maximum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Toledo |  | Cincinatti |  | Evansville, IN |  | Central Indiana |  | Central Illinois |  | North Central lowa |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April 10 | \$38.99 | -\$341 | \$36.13 | -\$341 | \$37.40 | -\$344 | \$37.65 | -\$344 | \$47.43 | -\$346 | \$41.14 | -\$315 |
| May 15 | \$33.22 | -\$403 | \$30.36 | -\$403 | \$31.41 | -\$408 | \$31.66 | -\$408 | \$41.19 | -\$414 | \$34.64 | -\$389 |
| June 23 | \$36.44 | -\$336 | \$33.58 | -\$336 | \$34.65 | -\$339 | \$34.90 | -\$339 | \$44.77 | -\$340 | \$38.49 | -\$309 |
| Average | \$36.22 | -\$360 | \$33.36 | -\$360 | \$34.49 | -\$364 | \$34.73 | -\$364 | \$44.46 | -\$367 | \$38.09 | -\$338 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$30.01 | -\$124 | \$27.15 | -\$124 | \$25.46 | -\$127 | \$25.71 | -\$127 | \$30.21 | -\$135 | \$28.70 | -\$145 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$26.25 | -\$114 | \$23.39 | -\$114 | \$21.97 | -\$110 | \$22.22 | -\$110 | \$27.87 | -\$117 | \$24.93 | -\$125 |
| June 26/May 31 | \$27.14 | -\$107 | \$24.28 | -\$107 | \$22.94 | -\$103 | \$23.19 | -\$103 | \$29.60 | -\$76 | \$26.27 | -\$88 |
| Average | \$27.80 | -\$86 | \$24.94 | -\$86 | \$23.46 | -\$88 | \$23.70 | -\$88 | \$29.23 | -\$94 | \$26.63 | -\$101 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 | \$30.99 | -\$133 | \$28.13 | -\$133 | \$26.38 | -\$137 | \$26.63 | -\$137 | \$31.67 | -\$145 | \$29.82 | -\$156 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$27.23 | -\$116 | \$24.37 | -\$116 | \$22.89 | -\$119 | \$23.14 | -\$119 | \$29.32 | -\$126 | \$26.30 | -\$136 |
| June 26/May 31 | \$28.47 | -\$104 | \$25.61 | -\$104 | \$24.08 | -\$102 | \$24.33 | -\$102 | \$31.22 | -\$85 | \$27.73 | -\$93 |
| Average | \$28.89 | -\$95 | \$26.04 | -\$95 | \$24.45 | -\$98 | \$24.70 | -\$98 | \$30.74 | -\$104 | \$27.95 | -\$111 |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 | \$31.68 | -\$143 | \$28.82 | -\$143 | \$27.16 | -\$147 | \$27.41 | -\$147 | \$33.00 | -\$155 | \$30.78 | -\$166 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$28.20 | -\$126 | \$25.34 | -\$126 | \$23.69 | -\$129 | \$23.94 | -\$129 | \$30.53 | -\$137 | \$27.26 | -\$147 |
| June 26/May 31 | \$29.34 | -\$100 | \$26.49 | -\$100 | \$24.82 | -\$100 | \$25.07 | -\$100 | \$32.53 | -\$95 | \$28.89 | -\$100 |


| Average | $\$ 29.74$ | $-\$ 105$ | $\$ 26.88$ | $-\$ 105$ | $\$ 25.23$ | $-\$ 108$ | $\$ 25.47$ | $-\$ 108$ | $\$ 32.02$ | $-\$ 114$ | $\$ 28.98$ | $-\$ 122$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Buy at the money put


## Corn 1985-2018

First number is weighted advantage/disadvantage per acre compared to harvest cash price; second price is maximum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Kansas City |  | $\begin{gathered} \text { Garden City, } \\ \text { KS } \end{gathered}$ |  | Denver |  | Omaha |  | Minneapolis |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April 10 | \$33.55 | -\$346 | \$36.53 | -\$288 | \$35.33 | -\$313 | \$37.22 | -\$304 | \$0.25 | -\$316 |
| May 15 | \$28.44 | -\$400 | \$31.48 | -\$338 | \$29.81 | -\$371 | \$31.12 | -\$361 | \$0.20 | -\$375 |
| June 23 | \$30.99 | -\$341 | \$34.10 | -\$284 | \$33.05 | -\$309 | \$34.13 | -\$322 | \$0.23 | -\$335 |
| Average | \$30.99 | -\$362 | \$34.04 | -\$303 | \$32.73 | -\$331 | \$34.16 | -\$314 | \$0.25 | -\$316 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$22.37 | -\$107 | \$22.97 | -\$99 | \$25.52 | -\$114 | \$26.26 | -\$134 | \$0.17 | -\$140 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$20.15 | -\$92 | \$20.76 | -\$85 | \$21.77 | -\$98 | \$22.52 | -\$116 | \$0.14 | -\$121 |
| June 26/May 31 | \$20.97 | -\$69 | \$21.69 | -\$58 | \$23.52 | -\$90 | \$23.35 | -\$98 | \$0.15 | -\$85 |
| Average | \$21.17 | -\$74 | \$21.81 | -\$69 | \$23.60 | -\$79 | \$24.04 | -\$93 | \$0.15 | -\$97 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| May 15/April 27 |  |  |  |  |  |  |  |  |  |  |
| June 26/May 31 | $\$ 23.82$ | $-\$ 115$ | $\$ 24.62$ | $-\$ 106$ | $\$ 26.65$ | $-\$ 123$ | $\$ 27.32$ | $-\$ 145$ | $\$ 0.17$ | $-\$ 150$ |
|  | $\$ 21.55$ | $-\$ 100$ | $\$ 22.41$ | $-\$ 92$ | $\$ 23.23$ | $-\$ 107$ | $\$ 23.77$ | $-\$ 126$ | $\$ 0.15$ | $-\$ 131$ |
|  | $\$ 22.36$ | $-\$ 70$ | $\$ 23.23$ | $-\$ 66$ | $\$ 24.63$ | $-\$ 89$ | $\$ 24.64$ | $-\$ 97$ | $\$ 0.16$ | $-\$ 89$ |
|  | $\$ 22.58$ | $-\$ 82$ | $\$ 23.42$ | $-\$ 76$ | $\$ 24.84$ | $-\$ 88$ | $\$ 25.24$ | $-\$ 103$ | $\$ 0.16$ | $-\$ 108$ |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 | \$24.97 | -\$123 | \$25.92 | -\$114 | \$27.50 | -\$132 | \$28.21 | -\$154 | \$0.18 | -\$160 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$22.62 | -\$109 | \$23.66 | -\$100 | \$24.12 | -\$116 | \$24.70 | -\$136 | \$0.16 | -\$142 |
| June 26/May 31 | \$23.43 | -\$78 | \$24.48 | -\$73 | \$25.47 | -\$87 | \$25.60 | -\$95 | \$0.17 | -\$95 |
| Average | \$23.67 | -\$91 | \$24.69 | -\$84 | \$25.70 | -\$97 | \$26.17 | -\$114 | \$0.17 | -\$118 |
| Buy at the money put |  |  |  |  |  |  |  |  |  |  |
| April 10 | \$22.86 | -\$61 | \$23.75 | -\$58 | \$24.49 | -\$74 | \$25.19 | -\$79 | \$0.16 | -\$75 |
| May 15 | \$18.06 | -\$59 | \$18.74 | -\$47 | \$19.93 | -\$79 | \$20.32 | -\$86 | \$0.13 | -\$76 |
| June 23 | \$24.14 | -\$52 | \$24.67 | -\$49 | \$27.16 | -\$63 | \$27.00 | -\$67 | \$0.18 | -\$64 |
| Average | \$21.69 | -\$54 | \$22.39 | -\$51 | \$23.86 | -\$72 | \$24.17 | -\$77 | \$0.16 | -\$67 |

## Sell average

| .. From 1/1-9/1 | $\$ 25.20$ | $-\$ 260$ | $\$ 27.61$ | $-\$ 208$ | $\$ 25.82$ | $-\$ 246$ | $\$ 27.23$ | $-\$ 288$ | $\$ 0.18$ | $-\$ 299$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| .. From 3/1-9/1 | $\$ 25.70$ | $-\$ 241$ | $\$ 27.95$ | $-\$ 191$ | $\$ 26.18$ | $-\$ 253$ | $\$ 27.71$ | $-\$ 296$ | $\$ 0.18$ | $-\$ 307$ |


| Sell futures/HTAs or buy puts 4/10, 5/15, 6/23; buy calls 2/28, 4/27, 5/31 |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sell Futures/HTA | \$30.99 | -\$362 | \$34.04 | -\$303 | \$32.73 | -\$331 | \$34.16 | -\$314 | \$0.25 | -\$316 |
| Sell futures/HTA, buy at-the-money call | \$21.17 | -\$74 | \$21.81 | -\$69 | \$23.60 | -\$79 | \$24.04 | -\$93 | \$0.15 | -\$97 |
| Sell futures/HTA, buy 1 strike out-ofmoney call | \$22.58 | -\$82 | \$23.42 | -\$76 | \$24.84 | -\$88 | \$25.24 | -\$103 | \$0.16 | -\$108 |
| Sell futures/HTA, buy 2 strike out-ofmoney call | \$23.67 | -\$91 | \$24.69 | -\$84 | \$25.70 | -\$97 | \$26.17 | -\$114 | \$0.17 | -\$118 |
| Buy at the money put | \$21.69 | -\$54 | \$22.39 | -\$51 | \$23.86 | -\$72 | \$24.17 | -\$77 | \$0.16 | -\$67 |

Results are based on futures and options settlements and cash prices during 1985-2018 crop years. Revenues are weighted by statewide yields, taking into account gains and losses from yields being more or less than expected, assuming $100 \%$ of normal yields are sold on dates indicated. Harvest dates varied according to date $50 \%$ of crops are harvested in weekly crop progress reports. Brokerage commissions figured at 1 cent per bushel. Remember, the risk of trading futures and options can be subutantial. Each investor must consider whether this is a suitabme investment. Past performance is not indicative of future results.

## New Crop Corn Pricing Strategies

|  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell <br> futures, buy 1 strike out of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1985 | \$0.27 | \$0.23 | \$0.32 | \$0.22 | \$0.26 | \$0.28 | \$0.23 |
| 1986 | \$0.23 | \$0.17 | \$0.22 | \$0.11 | \$0.14 | \$0.16 | \$0.12 |
| 1987 | (\$0.03) | (\$0.01) | \$0.12 | \$0.06 | \$0.06 | \$0.06 | \$0.01 |
| 1988 | (\$0.44) | (\$0.25) | (\$0.27) | \$0.36 | \$0.27 | \$0.17 | (\$0.02) |
| 1989 | \$0.15 | \$0.09 | \$0.15 | (\$0.04) | (\$0.02) | \$0.01 | (\$0.03) |
| 1990 | \$0.27 | \$0.31 | \$0.41 | \$0.24 | \$0.27 | \$0.30 | \$0.24 |
| 1991 | \$0.01 | (\$0.01) | (\$0.01) | (\$0.13) | (\$0.12) | (\$0.11) | (\$0.10) |
| 1992 | \$0.37 | \$0.34 | \$0.41 | \$0.23 | \$0.26 | \$0.29 | \$0.25 |
| 1993 | (\$0.19) | (\$0.19) | (\$0.19) | (\$0.18) | (\$0.23) | (\$0.27) | (\$0.17) |
| 1994 | \$0.30 | \$0.25 | \$0.29 | \$0.12 | \$0.15 | \$0.17 | \$0.15 |
| 1995 | (\$0.67) | (\$0.61) | (\$0.62) | (\$0.14) | (\$0.22) | (\$0.30) | (\$0.21) |
| 1996 | \$0.54 | \$0.64 | \$0.67 | \$0.36 | \$0.39 | \$0.42 | \$0.38 |
| 1997 | (\$0.15) | (\$0.16) | (\$0.14) | (\$0.17) | (\$0.19) | (\$0.20) | (\$0.11) |
| 1998 | \$0.36 | \$0.29 | \$0.42 | \$0.23 | \$0.26 | \$0.28 | \$0.23 |
| 1999 | \$0.29 | \$0.26 | \$0.29 | \$0.11 | \$0.14 | \$0.17 | \$0.12 |
| 2000 | \$0.32 | \$0.27 | \$0.43 | \$0.22 | \$0.25 | \$0.28 | \$0.22 |
| 2001 | \$0.22 | \$0.16 | \$0.11 | (\$0.07) | (\$0.04) | (\$0.01) | (\$0.01) |
| 2002 | (\$0.20) | (\$0.19) | (\$0.37) | (\$0.26) | (\$0.32) | (\$0.37) | (\$0.19) |
| 2003 | \$0.09 | \$0.07 | \$0.16 | \$0.02 | \$0.04 | \$0.05 | \$0.03 |
| 2004 | \$0.62 | \$0.63 | \$0.85 | \$0.59 | \$0.62 | \$0.65 | \$0.60 |
| 2005 | \$0.31 | \$0.33 | \$0.31 | \$0.11 | \$0.14 | \$0.17 | \$0.12 |
| 2006 | (\$0.48) | (\$0.45) | (\$0.43) | (\$0.24) | (\$0.28) | (\$0.32) | (\$0.19) |
| 2007 | \$0.20 | \$0.14 | \$0.18 | (\$0.19) | (\$0.16) | (\$0.14) | (\$0.09) |
| 2008 | \$2.15 | \$2.44 | \$2.86 | \$2.11 | \$2.15 | \$2.19 | \$1.70 |
| 2009 | \$0.12 | \$0.05 | \$0.33 | \$0.19 | \$0.19 | \$0.20 | (\$0.08) |
| 2010 | (\$1.26) | (\$1.30) | (\$1.39) | (\$0.25) | (\$0.30) | (\$0.37) | (\$0.40) |
| 2011 | (\$0.02) | \$0.21 | \$0.01 | (\$0.38) | (\$0.39) | (\$0.40) | (\$0.46) |
| 2012 | (\$2.03) | (\$1.84) | (\$3.09) | (\$0.76) | (\$0.85) | (\$0.93) | (\$0.33) |
| 2013 | \$0.90 | \$0.77 | \$1.01 | \$0.45 | \$0.50 | \$0.54 | \$0.60 |
| 2014 | \$0.83 | \$0.80 | \$1.18 | \$0.85 | \$0.89 | \$0.92 | \$0.85 |
| 2015 | \$0.14 | \$0.09 | \$0.03 | (\$0.18) | (\$0.17) | (\$0.16) | (\$0.15) |
| 2016 | \$0.30 | \$0.28 | \$0.41 | \$0.14 | \$0.17 | \$0.20 | \$0.14 |
| 2017 | \$0.33 | \$0.31 | \$0.34 | \$0.07 | \$0.10 | \$0.13 | \$0.13 |
| 2018 | \$0.25 | \$0.24 | \$0.35 | \$0.07 | \$0.11 | \$0.13 | \$0.10 |
| Average | \$0.120 | \$0.128 | \$0.157 | \$0.114 | \$0.120 | \$0.123 | \$0.109 |
| Profit odds | 71\% | 71\% | 74\% | 62\% | 62\% | 65\% | 56\% |

## Soybeans - 1985-2018

First number is weighted advantage/disadvantage per acre compared to harvest cash price; second price is maximum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Toledo |  | Cincinatti |  | Central Indiana |  | Central Illinois |  | North Central Iowa |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April 10 | \$13 | \$149 | \$13 | -\$82 | \$13 | -\$97 | \$14 | -\$95 | \$13 | -\$103 |
| May 15 | \$17 | \$149 | \$17 | -\$88 | \$17 | -\$92 | \$19 | -\$93 | \$18 | -\$110 |
| June 23 | \$19 | \$154 | \$19 | -\$83 | \$20 | -\$86 | \$21 | -\$87 | \$20 | -\$103 |
| Average | \$17 | \$150 | \$17 | -\$84 | \$17 | -\$88 | \$18 | -\$89 | \$17 | -\$105 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$7 | \$144 | \$7 | -\$47 | \$7 | -\$45 | \$8 | -\$50 | \$7 | -\$55 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$10 | \$144 | \$10 | -\$48 | \$10 | -\$45 | \$11 | -\$51 | \$9 | -\$54 |
| June 23/May 31 | \$11 | \$152 | \$11 | -\$41 | \$11 | -\$53 | \$12 | -\$52 | \$10 | -\$55 |
| Average | \$9 | \$146 | \$9 | -\$44 | \$10 | -\$29 | \$10 | -\$46 | \$9 | -\$50 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 | \$7 | \$144 | \$7 | -\$52 | \$7 | -\$52 | \$8 | -\$55 | \$6 | -\$59 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$10 | \$144 | \$10 | -\$53 | \$11 | -\$51 | \$11 | -\$56 | \$10 | -\$60 |
| June 23/May 31 | \$11 | \$152 | \$11 | -\$42 | \$12 | -\$50 | \$12 | -\$49 | \$11 | -\$52 |
| Average | \$9 | \$146 | \$9 | -\$49 | \$10 | -\$31 | \$10 | -\$52 | \$9 | -\$55 |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 | \$6 | \$144 | \$6 | -\$58 | \$7 | -\$58 | \$8 | -\$61 | \$6 | -\$65 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$10 | \$144 | \$10 | -\$58 | \$11 | -\$57 | \$12 | -\$61 | \$10 | -\$65 |
| June 23/May 31 | \$12 | \$151 | \$12 | -\$48 | \$13 | -\$47 | \$13 | -\$51 | \$11 | -\$55 |
| Average | \$9 | \$146 | \$9 | -\$55 | \$10 | -\$37 | \$11 | -\$58 | \$9 | -\$62 |

## Buy at the money put

|  | April 10 | \$4 | \$143 | \$4 | -\$39 | \$4 | -\$44 | \$6 | -\$43 | \$5 | -\$45 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | May 15 | \$9 | \$146 | \$9 | -\$37 | \$9 | -\$47 | \$10 | -\$46 | \$9 | -\$48 |
|  | June 23 | \$10 | \$149 | \$10 | -\$39 | \$10 | -\$41 | \$11 | -\$40 | \$10 | -\$42 |
|  | Average | \$8 | \$145 | \$8 | -\$37 | \$8 | -\$44 | \$9 | -\$43 | \$8 | -\$45 |
| Sell average |  |  |  |  |  |  |  |  |  |  |  |
| ... From 3/1-9/1 |  | \$13 | \$150 | \$13 | -\$68 | \$13 | -\$78 | \$15 | -\$75 | \$13 | -\$75 |


| Sell futures/HTAs or buy puts 4/10, 5/15, 6/23; buy calls 2/28, 4/27, 5/31 |  |  |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sell Futures/HTA | $\$ 17$ | $\$ 150$ | $\$ 17$ | $-\$ 84$ | $\$ 17$ | $-\$ 88$ | $\$ 18$ | $-\$ 89$ | $\$ 17$ | $-\$ 105$ |
| Sell futures/HTA, buy at- <br> the-money call | $\$ 9$ | $\$ 146$ | $\$ 9$ | $-\$ 44$ | $\$ 10$ | $-\$ 29$ | $\$ 10$ | $-\$ 46$ | $\$ 9$ | $-\$ 50$ |
| Sell futures/HTA, buy 1 <br> strike out-of-money call | $\$ 9$ | $\$ 146$ | $\$ 9$ | $-\$ 49$ | $\$ 10$ | $-\$ 31$ | $\$ 10$ | $-\$ 52$ | $\$ 9$ | $-\$ 55$ |
| Sell futures/HTA, buy 2 <br> strike out-of-money call | $\$ 9$ | $\$ 146$ | $\$ 9$ | $-\$ 55$ | $\$ 10$ | $-\$ 37$ | $\$ 11$ | $-\$ 58$ | $\$ 9$ | $-\$ 62$ |
| Buy at the money put | $\$ 8$ | $\$ 145$ | $\$ 8$ | $-\$ 37$ | $\$ 8$ | $-\$ 44$ | $\$ 9$ | $-\$ 43$ | $\$ 8$ | $-\$ 45$ |

## Soybeans - 1985-2018

First number is weighted advantage/disadvantage per acre compared to harvest cash price; second price is maximum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Kansas City |  | Garden City, KS |  | Omaha |  | Minneapolis |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April 10 | \$8 | -\$94 | \$9 | -\$72 | \$14 | -\$105 | \$0 | -\$106 |
| May 15 | \$11 | -\$88 | \$13 | -\$63 | \$18 | -\$112 | \$0 | -\$112 |
| June 23 | \$13 | -\$100 | \$14 | -\$60 | \$20 | -\$106 | \$0 | -\$107 |
| Average | \$11 | -\$94 | \$12 | -\$65 | \$17 | -\$108 | \$0 | -\$108 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$6 | -\$44 | \$7 | -\$39 | \$7 | -\$59 | \$0 | -\$44 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$8 | -\$37 | \$9 | -\$32 | \$10 | -\$55 | \$0 | -\$45 |
| June 23/May 31 | \$9 | -\$43 | \$9 | -\$38 | \$12 | -\$42 | \$0 | -\$46 |
| Average | \$8 | -\$29 | \$9 | -\$26 | \$9 | -\$50 | \$0 | -\$41 |
| Sell futures/HTA, (buy 1 strike out-of-money call) |  |  |  |  |  |  |  |  |
| April 10/Feb. 28 | \$6 | -\$48 | \$7 | -\$36 | \$6 | -\$60 | \$0 | -\$49 |
| May 15/April 27 | \$8 | -\$42 | \$9 | -\$36 | \$10 | -\$61 | \$0 | -\$50 |
| June 23/May 31 | \$9 | -\$40 | \$10 | -\$35 | \$12 | -\$49 | \$0 | -\$43 |
| Average | \$8 | -\$30 | \$9 | -\$27 | \$10 | -\$56 | \$0 | -\$46 |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 |  | \$5 | -\$52 | \$7 | -\$38 | \$6 | -\$66 | \$0 | -\$54 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 |  | \$8 | -\$46 | \$9 | -\$40 | \$10 | -\$66 | \$0 | -\$54 |
| June 23/May 31 |  | \$9 | -\$38 | \$10 | -\$33 | \$13 | -\$55 | \$0 | -\$45 |
|  | Average | \$8 | -\$33 | \$9 | -\$27 | \$10 | -\$63 | \$0 | -\$51 |

## Buy at the money put

|  | April 10 | \$4 | -\$35 | \$4 | -\$31 | \$5 | -\$39 | \$0 | -\$38 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | May 15 | \$7 | -\$38 | \$7 | -\$33 | \$10 | -\$41 | \$0 | -\$40 |
|  | June 23 | \$7 | -\$34 | \$8 | -\$29 | \$11 | -\$43 | \$0 | -\$36 |
|  | Average | \$6 | -\$35 | \$6 | -\$31 | \$9 | -\$41 | \$0 | -\$38 |
| Sell average |  |  |  |  |  |  |  |  |  |
| ... From 1/1-9/1 |  | \$6 | -\$90 | \$8 | -\$69 | \$12 | -\$102 | \$0 | -\$104 |
| ... From 3/1-9/1 |  | \$8 | -\$90 | \$10 | -\$67 | \$14 | -\$76 | \$0 | -\$81 |


| Sell futures/HTAs or buy puts 4/10, $\mathbf{5 / 1 5 , 6 / 2 3 ;}$ buy calls $\mathbf{2 / 2 8 , 4 / 2 7 , 5 / 3 1}$ |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sell Futures/HTA | $\$ 11$ | $-\$ 94$ | $\$ 12$ | $-\$ 65$ | $\$ 17$ | $-\$ 108$ | $\$ 0$ | $-\$ 108$ |
| Sell futures/HTA, buy at- <br> the-money call | $\$ 8$ | $-\$ 29$ | $\$ 9$ | $-\$ 26$ | $\$ 9$ | $-\$ 50$ | $\$ 0$ | $-\$ 41$ |
| Sell futures/HTA, buy 1 <br> strike out-of-money call | $\$ 8$ | $-\$ 30$ | $\$ 9$ | $-\$ 27$ | $\$ 10$ | $-\$ 56$ | $\$ 0$ | $-\$ 46$ |
| Sell futures/HTA, buy 2 <br> strike out-of-money call | $\$ 8$ | $-\$ 33$ | $\$ 9$ | $-\$ 27$ | $\$ 10$ | $-\$ 63$ | $\$ 0$ | $-\$ 51$ |
| Buy at the money put | $\$ 6$ | $-\$ 35$ | $\$ 6$ | $-\$ 31$ | $\$ 9$ | $-\$ 41$ | $\$ 0$ | $-\$ 38$ |

Results are based on futures and options settlements and cash prices during 1985-2018 crop years. Revenues are weighted by statewide yields, taking into account gains and losses from yields being more or less than expected, assuming $100 \%$ of normal yields are sold on dates indicated. Harvest dates varied according to date $50 \%$ of crops are harvested in weekly crop progress reports. Brokerage commissions figured at 1 cent per bushel. Remember, the risk of trading futures and options can be subutantial. Each investor must consider whether this is a suitable investment. Past performance is not indicative of future results.

## New Crop Soybean Pricing Strategies

|  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell <br> futures, buy at-themoney call | Sell futures, buy 1 strike out of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1985 | \$0.63 | \$0.54 | \$0.71 | \$0.46 | \$0.54 | \$0.59 | \$0.48 |
| 1986 | \$0.29 | \$0.23 | \$0.27 | \$0.02 | \$0.10 | \$0.15 | \$0.07 |
| 1987 | (\$0.24) | (\$0.13) | \$0.17 | \$0.20 | \$0.14 | \$0.10 | (\$0.10) |
| 1988 | (\$0.78) | (\$0.24) | (\$0.12) | \$0.81 | \$0.62 | \$0.44 | \$0.03 |
| 1989 | \$1.20 | \$1.03 | \$1.27 | \$0.76 | \$0.86 | \$0.93 | \$0.83 |
| 1990 | \$0.06 | \$0.12 | \$0.22 | (\$0.03) | \$0.00 | \$0.05 | (\$0.07) |
| 1991 | \$0.18 | \$0.12 | \$0.23 | (\$0.07) | (\$0.00) | \$0.05 | (\$0.03) |
| 1992 | \$0.58 | \$0.57 | \$0.75 | \$0.39 | \$0.46 | \$0.51 | \$0.42 |
| 1993 | \$0.08 | \$0.19 | \$0.00 | (\$0.12) | (\$0.21) | (\$0.22) | (\$0.27) |
| 1994 | \$0.74 | \$0.67 | \$0.74 | \$0.43 | \$0.49 | \$0.53 | \$0.46 |
| 1995 | (\$0.49) | (\$0.43) | (\$0.44) | (\$0.37) | (\$0.54) | (\$0.62) | (\$0.38) |
| 1996 | \$0.45 | \$0.57 | \$0.69 | \$0.22 | \$0.29 | \$0.34 | \$0.19 |
| 1997 | \$0.12 | \$0.07 | \$0.26 | (\$0.10) | (\$0.04) | (\$0.00) | (\$0.06) |
| 1998 | \$0.74 | \$0.59 | \$0.88 | \$0.52 | \$0.59 | \$0.65 | \$0.52 |
| 1999 | (\$0.02) | (\$0.16) | (\$0.12) | (\$0.29) | (\$0.31) | (\$0.29) | (\$0.21) |
| 2000 | \$0.32 | \$0.30 | \$0.58 | \$0.10 | \$0.19 | \$0.25 | \$0.20 |
| 2001 | \$0.19 | \$0.14 | (\$0.13) | (\$0.30) | (\$0.32) | (\$0.30) | (\$0.23) |
| 2002 | (\$0.52) | (\$0.39) | (\$0.75) | (\$0.22) | (\$0.36) | (\$0.51) | (\$0.32) |
| 2003 | (\$2.07) | (\$2.00) | (\$1.90) | (\$0.19) | (\$0.37) | (\$0.56) | (\$0.40) |
| 2004 | \$1.33 | \$1.38 | \$1.86 | \$1.31 | \$1.38 | \$1.42 | \$1.25 |
| 2005 | \$0.53 | \$0.77 | \$0.87 | \$0.42 | \$0.48 | \$0.53 | \$0.42 |
| 2006 | \$0.36 | \$0.34 | \$0.37 | (\$0.01) | \$0.04 | \$0.09 | \$0.03 |
| 2007 | (\$1.51) | (\$1.37) | (\$1.54) | (\$0.47) | (\$0.60) | (\$0.73) | (\$0.49) |
| 2008 | \$3.98 | \$4.23 | \$4.51 | \$2.75 | \$2.84 | \$2.92 | \$2.85 |
| 2009 | (\$0.43) | (\$0.37) | (\$0.18) | (\$0.42) | (\$0.46) | (\$0.51) | (\$0.76) |
| 2010 | (\$1.46) | (\$1.46) | (\$1.57) | (\$0.64) | (\$0.76) | (\$0.88) | (\$0.55) |
| 2011 | \$1.50 | \$1.57 | \$1.29 | \$0.22 | \$0.30 | \$0.38 | \$0.37 |
| 2012 | (\$2.12) | (\$1.52) | (\$2.25) | (\$0.41) | (\$0.54) | (\$0.68) | (\$0.92) |
| 2013 | (\$0.13) | (\$0.22) | (\$0.28) | (\$0.48) | (\$0.55) | (\$0.61) | (\$0.45) |
| 2014 | \$1.81 | \$1.91 | \$2.42 | \$1.80 | \$1.88 | \$1.95 | \$1.79 |
| 2015 | \$0.58 | \$0.50 | \$0.55 | \$0.07 | \$0.13 | \$0.20 | \$0.01 |
| 2016 | \$0.20 | \$0.46 | \$0.81 | \$0.57 | \$0.57 | \$0.58 | \$0.45 |
| 2017 | \$0.03 | (\$0.10) | (\$0.26) | (\$0.59) | (\$0.59) | (\$0.58) | (\$0.35) |
| 2018 | \$1.08 | \$0.96 | \$1.32 | \$0.73 | \$0.80 | \$0.87 | \$0.74 |
| Average | \$0.211 | \$0.261 | \$0.330 | \$0.208 | \$0.207 | \$0.208 | \$0.162 |
| Profit odds | 68\% | 64\% | 64\% | 52\% | 58\% | 61\% | 52\% |

## Corn - 2018 Crop Year

First number is weighted advantage/disadvantage per acre compared to harvest cash price for 2018; second price is mazimum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Toledo |  | Cincinatti |  | Evansville, IN |  | Central Indiana |  | Central Illinois |  | North Central lowa |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 4/10 | \$62 | -\$341 | \$62 | -\$341 | \$82 | -\$344 | \$82 | -\$344 | \$90 | -\$346 | \$82 | -\$315 |
| 5/15 | \$75 | -\$403 | \$75 | -\$403 | \$95 | -\$408 | \$95 | -\$408 | \$104 | -\$414 | \$96 | -\$389 |
| 6/23 | \$1 | -\$336 | \$1 | -\$336 | \$20 | -\$339 | \$20 | -\$339 | \$22 | -\$340 | \$12 | -\$309 |
| Average | \$46 | -\$360 | \$46 | -\$360 | \$66 | -\$364 | \$66 | -\$364 | \$72 | -\$367 | \$63 | -\$338 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$16 | -\$124 | \$16 | -\$124 | \$35 | -\$127 | \$35 | -\$127 | \$41 | -\$135 | \$28 | -\$145 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$23 | -\$114 | \$23 | -\$114 | \$42 | -\$110 | \$42 | -\$110 | \$47 | -\$117 | \$37 | -\$125 |
| June 26/May 31 | -\$52 | -\$107 | -\$52 | -\$107 | -\$33 | -\$103 | -\$33 | -\$103 | -\$36 | -\$76 | -\$47 | -\$88 |
| Averag | -\$4 | -\$86 | -\$4 | -\$86 | \$15 | -\$88 | \$15 | -\$88 | \$18 | -\$94 | \$6 | -\$10 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 | \$22 | -\$133 | \$22 | -\$133 | \$41 | -\$137 | \$41 | -\$137 | \$46 | -\$145 | \$35 | -\$156 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$29 | -\$116 | \$29 | -\$116 | \$49 | -\$119 | \$49 | -\$119 | \$54 | -\$126 | \$44 | -\$136 |
| June 26/May 31 | -\$42 | -\$104 | -\$42 | -\$104 | -\$23 | -\$102 | -\$23 | -\$102 | -\$25 | -\$85 | -\$36 | -\$93 |
| Average | \$3 | -\$95 | \$3 | -\$95 | \$22 | -\$98 | \$22 | -\$98 | \$25 | -\$104 | \$14 | -\$111 |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 | \$26 | -\$143 | \$26 | -\$143 | \$46 | -\$147 | \$46 | -\$147 | \$51 | -\$155 | \$41 | -\$166 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$34 | -\$126 | \$34 | -\$126 | \$54 | -\$129 | \$54 | -\$129 | \$59 | -\$137 | \$50 | -\$147 |
| June 26/May 31 | -\$40 | -\$100 | -\$40 | -\$100 | -\$21 | -\$100 | -\$21 | -\$100 | -\$23 | -\$95 | -\$34 | -\$100 |
| Average | \$7 | -\$105 | \$7 | -\$105 | \$27 | -\$108 | \$27 | -\$108 | \$29 | -\$114 | \$19 | -\$122 |

Buy at the money put

| 4/10 | \$11 | -\$90 | \$11 | -\$90 | \$31 | -\$85 | \$31 | -\$85 | \$35 | -\$75 | \$24 | -\$79 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5/15 | \$25 | -\$97 | \$25 | -\$97 | \$45 | -\$90 | \$45 | -\$90 | \$49 | -\$61 | \$39 | -\$78 |
| 6/23 | -\$32 | -\$80 | -\$32 | -\$80 | -\$15 | -\$73 | -\$15 | -\$73 | -\$12 | -\$64 | -\$29 | -\$68 |
| Average | \$2 | -\$89 | \$2 | -\$89 | \$20 | -\$82 | \$20 | -\$82 | \$24 | -\$67 | \$11 | -\$71 |
| Sell average |  |  |  |  |  |  |  |  |  |  |  |  |
| ... From 3/1-9/1 | \$27 | -\$219 | \$27 | -\$219 | \$47 | -\$219 | \$47 | -\$219 | \$51 | -\$213 | \$42 | -\$177 |


| Sell futures/HTAs or buy puts 4/10, 5/15, 6/23; buy calls 2/28, 4/27, 5/31 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sell Futures/HTA | \$46 | -\$360 | \$46 | -\$360 | \$66 | -\$364 | \$66 | -\$364 | \$72 | -\$367 | \$63 | -\$338 |
| Sell futures/HTA, buy at-the-money call | -\$4 | -\$86 | -\$4 | -\$86 | \$15 | -\$88 | \$15 | -\$88 | \$18 | -\$94 | \$6 | -\$101 |
| Sell futures/HTA, buy 1 strike out-of-money call | \$3 | -\$95 | \$3 | -\$95 | \$22 | -\$98 | \$22 | -\$98 | \$25 | -\$104 | \$14 | -\$111 |
| Sell futures/HTA, buy 2 strike out-of-money call | \$7 | -\$105 | \$7 | -\$105 | \$27 | -\$108 | \$27 | -\$108 | \$29 | -\$114 | \$19 | -\$122 |
| Buy at the money put | \$2 | -\$89 | \$2 | -\$89 | \$20 | -\$82 | \$20 | -\$82 | \$24 | -\$67 | \$11 | -\$71 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

## Corn - 2018 Crop Year

First number is weighted advantage/disadvantage per acre compared to harvest cash price for 2018; second price is mazimum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Kansas City |  | Garden City, KS |  | Denver |  | Omaha |  | Minneapolis |  | 11-terminal average |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2018 | 85-18 ave. |  |  | Biggest loss |  |  |
| 4/10 | \$100 | -\$346 |  |  | \$63 | -\$288 |  |  | \$60 | -\$313 | \$78 | -\$304 | \$79 | -\$316 | \$76 | \$38 | -\$327 |
| 5/15 | \$112 | -\$400 | \$73 | -\$338 | \$71 | -\$371 | \$92 | -\$361 | \$92 | -\$375 | \$89 | \$32 | -\$388 |
| 6/23 | \$45 | -\$341 | \$15 | -\$284 | \$9 | -\$309 | \$12 | -\$322 | \$12 | -\$335 | \$15 | \$35 | -\$326 |
| Average | \$86 | -\$362 | \$50 | -\$303 | \$47 | -\$331 | \$61 | -\$314 | \$61 | -\$316 | \$60 | \$35 | -\$343 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$58 | -\$107 | \$29 | -\$99 | \$21 | -\$114 | \$27 | -\$134 | \$27 | -\$140 | \$30 | \$26 | -\$125 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$65 | -\$92 | \$33 | -\$85 | \$27 | -\$98 | \$35 | -\$116 | \$36 | -\$121 | \$37 | \$23 | -\$109 |
| June 26/May 31 | -\$3 | -\$69 | -\$25 | -\$58 | -\$35 | -\$90 | -\$45 | -\$98 | -\$46 | -\$85 | -\$37 | \$24 | -\$89 |
| Average | \$40 | -\$74 | \$12 | -\$69 | \$4 | -\$79 | \$6 | -\$93 | \$6 | -\$97 | \$10 | \$24 | -\$87 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 | \$64 | -\$115 | \$33 | -\$106 | \$26 | -\$123 | \$34 | -\$145 | \$34 | -\$150 | \$36 | \$27 | -\$135 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$71 | -\$100 | \$38 | -\$92 | \$33 | -\$107 | \$42 | -\$126 | \$43 | -\$131 | \$44 | \$24 | -\$117 |
| June 26/May 31 | \$6 | -\$70 | -\$18 | -\$66 | -\$27 | -\$89 | -\$35 | -\$97 | -\$35 | -\$89 | -\$27 | \$25 | -\$91 |
| Average | \$47 | -\$82 | \$18 | -\$76 | \$11 | -\$88 | \$14 | -\$103 | \$14 | -\$108 | \$17 | \$25 | -\$96 |
| Sell futures/HTA, (buy 2 strike out-of-money call) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| April 10/Feb. 28 | \$68 | -\$123 | \$36 | -\$114 | \$30 | -\$132 | \$39 | -\$154 | \$39 | -\$160 | \$41 | \$28 | -\$144 |
| May 15/April 27 | \$76 | -\$109 | \$42 | -\$100 | \$37 | -\$116 | \$48 | -\$136 | \$48 | -\$142 | \$49 | \$25 | -\$127 |
| June 26/May 31 | \$8 | -\$78 | -\$16 | -\$73 | -\$25 | -\$87 | -\$32 | -\$95 | -\$33 | -\$95 | -\$25 | \$26 | -\$93 |
| Average | \$50 | -\$91 | \$21 | -\$84 | \$14 | -\$97 | \$18 | -\$114 | \$18 | -\$118 | \$22 | \$26 | -\$106 |
| Buy at the money put |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4/10 | \$55 | -\$61 | \$24 | -\$58 | \$18 | -\$74 | \$23 | -\$79 | \$23 | -\$75 | \$26 | \$25 | -\$77 |
| 5/15 | \$67 | -\$59 | \$35 | -\$47 | \$29 | -\$79 | \$38 | -\$86 | \$38 | -\$76 | \$39 | \$20 | -\$78 |
| 6/23 | \$13 | -\$52 | -\$9 | -\$49 | -\$21 | -\$63 | -\$28 | -\$67 | -\$28 | -\$64 | -\$19 | \$27 | -\$67 |
| Average | \$45 | -\$54 | \$17 | -\$51 | \$8 | -\$72 | \$11 | -\$77 | \$11 | -\$67 | \$15 | \$24 | -\$73 |

Sell average

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\ldots$ From 1/1-9/1 | $\$ 69$ | $-\$ 260$ | $\$ 36$ | $-\$ 208$ | $\$ 31$ | $-\$ 246$ | $\$ 41$ | $-\$ 288$ | $\$ 41$ | $-\$ 299$ | $\$ 42$ | $\$ 28$ | $-\$ 246$ |
| $\ldots$ From 3/1-9/1 | $\$ 69$ | $-\$ 241$ | $\$ 36$ | $-\$ 191$ | $\$ 31$ | $-\$ 253$ | $\$ 41$ | $-\$ 296$ | $\$ 41$ | $-\$ 307$ | $\$ 42$ | $\$ 29$ | $-\$ 232$ |


| Sell Futures/HTA | \$86 | -\$362 | \$50 | -\$303 | \$47 | -\$331 | \$61 | -\$314 | \$61 | -\$316 | \$60 | \$35 | -\$343 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sell futures/HTA, buy at-the-money call | \$40 | -\$74 | \$12 | -\$69 | \$4 | -\$79 | \$6 | -\$93 | \$6 | -\$97 | \$11 | \$24 | -\$87 |
| Sell futures/HTA, buy 1 strike out-of-money call | \$47 | -\$82 | \$18 | -\$76 | \$11 | -\$88 | \$14 | -\$103 | \$14 | -\$108 | \$18 | \$25 | -\$96 |
| Sell futures/HTA, buy 2 strike out-of-money call | \$50 | -\$91 | \$21 | -\$84 | \$14 | -\$97 | \$18 | -\$114 | \$18 | -\$118 | \$22 | \$26 | -\$106 |
| Buy at the money put | \$45 | -\$54 | \$17 | -\$51 | \$8 | -\$72 | \$11 | -\$77 | \$11 | -\$67 | \$16 | \$24 | -\$73 |

Results are based on futures and options settlements and cash prices during 1985-2018 crop years. Revenues are weighted by statewide yields, taking into account gains and losses from yields being more or less than expected, assuming 100\% of normal yields are sold on dates indicated. Harvest dates varied according to date 50\% of crops are harvested in weekly crop progress reports. Brokerage commissions figured at 1 cent per bushel. Remember, the risk of trading futures and options can be subutantial. Each investor must consider whether this is a suitable investment. Past performance is not indicative of future results.

Soybeans: 2018 Results
First number is weighted advantage/disadvantage per acre compared to harvest cash price for 2018; second price is mazimum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Toledo |  | Cincinatti |  | Central Indiana |  | Central Illinois |  | North Central Iowa |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| April 10 | \$102 | -\$82 | \$102 | -\$82 | \$104 | -\$97 | \$103 | -\$95 | \$108 | -\$103 |
| May 15 | \$90 | -\$88 | \$90 | -\$88 | \$92 | -\$92 | \$90 | -\$93 | \$96 | -\$110 |
| June 23 | \$30 | -\$83 | \$30 | -\$83 | \$31 | -\$86 | \$27 | -\$87 | \$33 | -\$103 |
| Average | \$74 | -\$84 | \$74 | -\$84 | \$76 | -\$88 | \$73 | -\$89 | \$79 | -\$105 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$72 | -\$47 | \$72 | -\$47 | \$74 | -\$45 | \$71 | -\$50 | \$77 | -\$55 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$59 | -\$48 | \$59 | -\$48 | \$60 | -\$45 | \$57 | -\$51 | \$63 | -\$54 |
| June 23/May 31 | -\$3 | -\$41 | -\$3 | -\$41 | -\$3 | -\$53 | -\$8 | -\$52 | -\$2 | -\$55 |
| Average | \$43 | -\$44 | \$43 | -\$44 | \$44 | -\$29 | \$40 | -\$46 | \$46 | -\$50 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 | \$75 | -\$52 | \$75 | -\$52 | \$77 | -\$52 | \$75 | -\$55 | \$80 | -\$59 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$62 | -\$53 | \$62 | -\$53 | \$64 | -\$51 | \$61 | -\$56 | \$66 | -\$60 |
| June 23/May 31 | \$1 | -\$42 | \$1 | -\$42 | \$1 | -\$50 | -\$4 | -\$49 | \$2 | -\$52 |
| Average | \$46 | -\$49 | \$46 | -\$49 | \$47 | -\$31 | \$44 | -\$52 | \$50 | -\$55 |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 | \$79 | -\$58 | \$79 | -\$58 | \$81 | -\$58 | \$78 | -\$61 | \$84 | -\$65 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$66 | -\$58 | \$66 | -\$58 | \$68 | -\$57 | \$65 | -\$61 | \$70 | -\$65 |
| June 23/May 31 | \$6 | -\$48 | \$6 | -\$48 | \$6 | -\$47 | \$1 | -\$51 | \$7 | -\$55 |
| Average | \$50 | -\$55 | \$50 | -\$55 | \$51 | -\$37 | \$48 | -\$58 | \$54 | -\$62 |

Buy at the money put

| April 10 | $\$ 63$ | $-\$ 39$ | $\$ 63$ | $-\$ 39$ | $\$ 65$ | $-\$ 44$ | $\$ 62$ | $-\$ 43$ | $\$ 67$ | $-\$ 45$ |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15 | $\$ 60$ | $-\$ 37$ | $\$ 60$ | $-\$ 37$ | $\$ 62$ | $-\$ 47$ | $\$ 59$ | $-\$ 46$ | $\$ 65$ | $-\$ 48$ |
|  | June 23 | $\$ 7$ | $-\$ 39$ | $\$ 7$ | $-\$ 39$ | $\$ 7$ | $-\$ 41$ | $\$ 1$ | $-\$ 40$ | $\$ 6$ |
|  | $-\$ 42$ |  |  |  |  |  |  |  |  |  |

## Sell Average

| $\ldots$ From 1/1-9/1 | $\$ 61$ | $-\$ 80$ | $\$ 61$ | $-\$ 80$ | $\$ 63$ | $-\$ 84$ | $\$ 60$ | $-\$ 84$ | $\$ 66$ | $-\$ 100$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\ldots$ From 3/1-9/1 | $\$ 55$ | $-\$ 68$ | $\$ 55$ | $-\$ 68$ | $\$ 56$ | $-\$ 78$ | $\$ 53$ | $-\$ 75$ | $\$ 59$ | $-\$ 75$ |

Sell futures/HTAs or buy puts 4/10, 5/15, 6/23; buy calls 2/28, 4/27, 5/31

| Sell Futures/HTA | $\$ 74$ | $-\$ 84$ | $\$ 74$ | $-\$ 84$ | $\$ 76$ | $-\$ 88$ | $\$ 73$ | $-\$ 89$ | $\$ 79$ | $-\$ 105$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sell futures/HTA, <br> buy at-the-money <br> call | $\$ 43$ | $-\$ 44$ | $\$ 43$ | $-\$ 44$ | $\$ 44$ | $-\$ 29$ | $\$ 40$ | $-\$ 46$ | $\$ 46$ | $-\$ 50$ |
| Sell futures/HTA, <br> buy 1 strike out- <br> of-money call | $\$ 46$ | $-\$ 49$ | $\$ 46$ | $-\$ 49$ | $\$ 47$ | $-\$ 31$ | $\$ 44$ | $-\$ 52$ | $\$ 50$ | $-\$ 55$ |
| Sell futures/HTA, <br> buy 2 strike out- <br> of-money call | $\$ 50$ | $-\$ 55$ | $\$ 50$ | $-\$ 55$ | $\$ 51$ | $-\$ 37$ | $\$ 48$ | $-\$ 58$ | $\$ 54$ | $-\$ 62$ |
| Buy at the money <br> put | $\$ 43$ | $-\$ 37$ | $\$ 43$ | $-\$ 37$ | $\$ 44$ | $-\$ 44$ | $\$ 41$ | $-\$ 43$ | $\$ 46$ | $-\$ 45$ |

## Soybeans: 2018 Results

First number is weighted advantage/disadvantage per acre compared to harvest cash price for 2018; second price is mazimum disadvantage vs. harvest revenues per acre

| Sell Futures/HTA | Kansas City |  | Garden City, KS |  | Omaha |  | Minneapolis |  | 9-terminal average |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 2018 | 85-18 ave. |  |  | Biggest loss |
| April 10 | \$88 | -\$94 |  |  | \$78 | -\$72 |  |  | \$94 | -\$105 | \$75 | -\$106 | \$95 | \$12 | -\$93 |
| May 15 | \$78 | -\$88 | \$69 | -\$63 | \$81 | -\$112 | \$64 | -\$112 | \$83 | \$16 | -\$94 |
| June 23 | \$27 | -\$100 | \$24 | -\$60 | \$14 | -\$106 | \$11 | -\$107 | \$25 | \$18 | -\$91 |
| Average | \$64 | -\$94 | \$57 | -\$65 | \$63 | -\$108 | \$50 | -\$108 | \$68 | \$15 | -\$92 |

Sell futures/HTA on first date, buy at-the-money call on second date

| April 10/Feb. 28 | \$62 | -\$44 | \$55 | -\$39 | \$61 | -\$59 | \$48 | -\$44 | \$66 | \$7 | -\$48 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$51 | -\$37 | \$45 | -\$32 | \$46 | -\$55 | \$37 | -\$45 | \$53 | \$9 | -\$46 |
| June 23/May 31 | -\$2 | -\$43 | -\$1 | -\$38 | -\$23 | -\$42 | -\$18 | -\$46 | -\$7 | \$10 | -\$46 |
| Average | \$37 | -\$29 | \$33 | -\$26 | \$28 | -\$50 | \$22 | -\$41 | \$37 | \$9 | -\$40 |

Sell futures/HTA, (buy 1 strike out-of-money call)

| April 10/Feb. 28 | \$65 | -\$48 | \$58 | -\$36 | \$64 | -\$60 | \$51 | -\$49 | \$69 | \$7 | -\$51 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$54 | -\$42 | \$48 | -\$36 | \$49 | -\$61 | \$39 | -\$50 | \$56 | \$10 | -\$51 |
| June 23/May 31 | \$2 | -\$40 | \$2 | -\$35 | -\$18 | -\$49 | -\$15 | -\$43 | -\$3 | \$11 | -\$45 |
| Average | \$40 | -\$30 | \$36 | -\$27 | \$32 | -\$56 | \$25 | -\$46 | \$41 | \$9 | -\$44 |

Sell futures/HTA, (buy 2 strike out-of-money call)

| April 10/Feb. 28 | \$68 | -\$52 | \$61 | -\$38 | \$68 | -\$66 | \$54 | -\$54 | \$72 | \$6 | -\$57 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15/April 27 | \$57 | -\$46 | \$51 | -\$40 | \$54 | -\$66 | \$43 | -\$54 | \$60 | \$10 | -\$56 |
| June 23/May 31 | \$6 | -\$38 | \$5 | -\$33 | -\$13 | -\$55 | -\$11 | -\$45 | \$1 | \$11 | -\$47 |
| Average | \$44 | -\$33 | \$39 | -\$27 | \$36 | -\$63 | \$29 | -\$51 | \$45 | \$9 | -\$49 |

Buy at the money put

| April 10 | \$55 | -\$35 | \$49 | -\$31 | \$51 | -\$39 | \$41 | -\$38 | \$57 | \$4 | -\$39 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| May 15 | \$52 | -\$38 | \$47 | -\$33 | \$48 | -\$41 | \$38 | -\$40 | \$55 | \$8 | -\$41 |
| June 23 | \$5 | -\$34 | \$4 | -\$29 | -\$13 | -\$43 | -\$10 | -\$36 | \$2 | \$9 | -\$38 |
| Average | \$37 | -\$35 | \$33 | -\$31 | \$29 | -\$41 | \$23 | -\$38 | \$38 | \$7 | -\$39 |

Sell Average

| ... From 1/1-9/1 | \$53 | -\$90 | \$47 | -\$69 | \$49 | -\$102 | \$39 | -\$104 | \$55 | \$10 | -\$88 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| From 3/1-9/1 | \$48 | -\$90 | \$42 | -\$67 | \$42 | -\$76 | \$33 | -\$81 | \$49 | \$12 | -\$75 |
| Sell futures/HTAs or buy puts 4/10, 5/15, 6/23; buy calls 2/28, 4/27, $5 / 31$ |  |  |  |  |  |  |  |  |  |  |  |
| Sell Futures/HTA | \$64 | -\$94 | \$57 | -\$65 | \$63 | -\$108 | \$50 | -\$108 | \$68 | \$15 | -\$92 |
| Sell futures/HTA, buy at-the-money call | \$37 | -\$29 | \$33 | -\$26 | \$28 | -\$50 | \$22 | -\$41 | \$37 | \$9 | -\$40 |
| Sell futures/HTA, buy 1 strike out-of-money call | \$40 | -\$30 | \$36 | -\$27 | \$32 | -\$56 | \$25 | -\$46 | \$41 | \$9 | -\$44 |
| Sell futures/HTA, buy 2 strike out-of-money call | \$44 | -\$33 | \$39 | -\$27 | \$36 | -\$63 | \$29 | -\$51 | \$45 | \$9 | -\$49 |
| Buy at the money put | \$37 | -\$35 | \$33 | -\$31 | \$29 | -\$41 | \$23 | -\$38 | \$38 | \$7 | -\$39 |

Results are based on futures and options settlements and cash prices during 2018 crop year. Revenues are weighted by statewide yields, taking into account gains and losses from yields being more or less than expected, assuming $100 \%$ of normal yields are sold on dates indicated. Harvest dates varied according to date $50 \%$ of crops are harvested in weekly crop progress reports. Brokerage commissions figured at 1 cent per bushel. Remember, the risk of trading futures and options can be subptantial. Each investor must consider whether this is a suitable investment. Past performance is not indicative of future results.

## Central Illinois Corn Selling Strategies Results

|  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1985 | \$0.29 | \$0.26 | \$0.35 | \$0.25 | \$0.28 | \$0.31 | \$0.26 |
| 1986 | \$0.28 | \$0.22 | \$0.28 | \$0.16 | \$0.19 | \$0.22 | \$0.18 |
| 1987 | \$0.03 | \$0.06 | \$0.18 | \$0.10 | \$0.11 | \$0.12 | \$0.06 |
| 1988 | (\$0.59) | (\$0.35) | (\$0.38) | \$0.46 | \$0.35 | \$0.23 | (\$0.03) |
| 1989 | \$0.19 | \$0.14 | \$0.19 | \$0.00 | \$0.03 | \$0.06 | \$0.01 |
| 1990 | \$0.29 | \$0.32 | \$0.43 | \$0.26 | \$0.29 | \$0.32 | \$0.25 |
| 1991 | (\$0.03) | (\$0.05) | (\$0.05) | (\$0.14) | (\$0.14) | (\$0.13) | (\$0.10) |
| 1992 | \$0.35 | \$0.31 | \$0.38 | \$0.22 | \$0.25 | \$0.27 | \$0.23 |
| 1993 | (\$0.15) | (\$0.15) | (\$0.16) | (\$0.14) | (\$0.19) | (\$0.22) | (\$0.14) |
| 1994 | \$0.28 | \$0.24 | \$0.27 | \$0.12 | \$0.15 | \$0.17 | \$0.15 |
| 1995 | (\$0.62) | (\$0.56) | (\$0.57) | (\$0.14) | (\$0.22) | (\$0.31) | (\$0.22) |
| 1996 | \$0.49 | \$0.59 | \$0.61 | \$0.31 | \$0.34 | \$0.37 | \$0.33 |
| 1997 | (\$0.22) | (\$0.22) | (\$0.21) | (\$0.20) | (\$0.23) | (\$0.25) | (\$0.13) |
| 1998 | \$0.39 | \$0.31 | \$0.44 | \$0.25 | \$0.28 | \$0.31 | \$0.25 |
| 1999 | \$0.22 | \$0.20 | \$0.23 | \$0.05 | \$0.08 | \$0.11 | \$0.07 |
| 2000 | \$0.35 | \$0.31 | \$0.46 | \$0.25 | \$0.28 | \$0.31 | \$0.26 |
| 2001 | \$0.15 | \$0.09 | \$0.04 | (\$0.11) | (\$0.09) | (\$0.07) | (\$0.05) |
| 2002 | (\$0.12) | (\$0.11) | (\$0.27) | (\$0.23) | (\$0.28) | (\$0.31) | (\$0.17) |
| 2003 | \$0.17 | \$0.15 | \$0.24 | \$0.09 | \$0.11 | \$0.12 | \$0.11 |
| 2004 | \$0.59 | \$0.60 | \$0.81 | \$0.57 | \$0.59 | \$0.62 | \$0.57 |
| 2005 | \$0.33 | \$0.35 | \$0.32 | \$0.11 | \$0.14 | \$0.17 | \$0.12 |
| 2006 | (\$0.12) | (\$0.10) | (\$0.07) | (\$0.20) | (\$0.20) | (\$0.20) | (\$0.15) |
| 2007 | \$0.17 | \$0.12 | \$0.16 | (\$0.16) | (\$0.15) | (\$0.13) | (\$0.07) |
| 2008 | \$2.07 | \$2.35 | \$2.74 | \$2.04 | \$2.08 | \$2.11 | \$1.63 |
| 2009 | \$0.05 | (\$0.03) | \$0.28 | \$0.14 | \$0.13 | \$0.13 | (\$0.17) |
| 2010 | (\$1.22) | (\$1.27) | (\$1.36) | (\$0.51) | (\$0.57) | (\$0.64) | (\$0.43) |
| 2011 | \$0.39 | \$0.61 | \$0.42 | (\$0.09) | (\$0.09) | (\$0.08) | (\$0.12) |
| 2012 | (\$2.26) | (\$2.03) | (\$3.49) | (\$0.89) | (\$0.99) | (\$1.09) | (\$0.31) |
| 2013 | \$0.86 | \$0.73 | \$0.96 | \$0.43 | \$0.47 | \$0.51 | \$0.55 |
| 2014 | \$0.81 | \$0.78 | \$1.14 | \$0.83 | \$0.86 | \$0.89 | \$0.83 |
| 2015 | \$0.10 | \$0.05 | (\$0.01) | (\$0.18) | (\$0.18) | (\$0.18) | (\$0.15) |
| 2016 | \$0.44 | \$0.42 | \$0.55 | \$0.28 | \$0.32 | \$0.34 | \$0.28 |
| 2017 | \$0.32 | \$0.30 | \$0.33 | \$0.06 | \$0.10 | \$0.13 | \$0.13 |
| 2018 | \$0.24 | \$0.24 | \$0.34 | \$0.08 | \$0.12 | \$0.14 | \$0.11 |
| Average | \$0.133 | \$0.144 | \$0.164 | \$0.119 | \$0.125 | \$0.128 | \$0.123 |

Central Illinois Soybean Selling Strategies Results

|  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell <br> futures, buy at-themoney call | Sell futures, buy 1 strike out of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1985 | \$0.62 | \$0.53 | \$0.70 | \$0.45 | \$0.53 | \$0.58 | \$0.47 |
| 1986 | \$0.30 | \$0.24 | \$0.28 | \$0.02 | \$0.11 | \$0.16 | \$0.07 |
| 1987 | (\$0.11) | \$0.01 | \$0.33 | \$0.27 | \$0.23 | \$0.21 | (\$0.01) |
| 1988 | (\$0.76) | (\$0.16) | (\$0.03) | \$0.91 | \$0.72 | \$0.53 | \$0.07 |
| 1989 | \$1.02 | \$0.87 | \$1.09 | \$0.63 | \$0.71 | \$0.78 | \$0.69 |
| 1990 | \$0.10 | \$0.16 | \$0.27 | (\$0.01) | \$0.03 | \$0.09 | (\$0.05) |
| 1991 | \$0.05 | (\$0.01) | \$0.10 | (\$0.17) | (\$0.12) | (\$0.07) | (\$0.11) |
| 1992 | \$0.57 | \$0.56 | \$0.74 | \$0.38 | \$0.45 | \$0.50 | \$0.40 |
| 1993 | \$0.09 | \$0.19 | \$0.02 | (\$0.09) | (\$0.15) | (\$0.16) | (\$0.21) |
| 1994 | \$0.71 | \$0.63 | \$0.71 | \$0.39 | \$0.45 | \$0.49 | \$0.42 |
| 1995 | (\$0.38) | (\$0.32) | (\$0.33) | (\$0.36) | (\$0.49) | (\$0.52) | (\$0.37) |
| 1996 | \$0.61 | \$0.73 | \$0.85 | \$0.35 | \$0.43 | \$0.49 | \$0.33 |
| 1997 | \$0.41 | \$0.36 | \$0.56 | \$0.14 | \$0.23 | \$0.28 | \$0.16 |
| 1998 | \$0.69 | \$0.53 | \$0.82 | \$0.46 | \$0.54 | \$0.60 | \$0.47 |
| 1999 | \$0.01 | (\$0.12) | (\$0.08) | (\$0.26) | (\$0.26) | (\$0.24) | (\$0.18) |
| 2000 | \$0.32 | \$0.30 | \$0.55 | \$0.11 | \$0.19 | \$0.25 | \$0.20 |
| 2001 | \$0.10 | \$0.06 | (\$0.21) | (\$0.33) | (\$0.37) | (\$0.37) | (\$0.25) |
| 2002 | (\$0.48) | (\$0.36) | (\$0.69) | (\$0.20) | (\$0.33) | (\$0.46) | (\$0.30) |
| 2003 | (\$1.76) | (\$1.69) | (\$1.59) | (\$0.19) | (\$0.38) | (\$0.57) | (\$0.40) |
| 2004 | \$1.31 | \$1.36 | \$1.83 | \$1.29 | \$1.36 | \$1.40 | \$1.23 |
| 2005 | \$0.59 | \$0.84 | \$0.95 | \$0.47 | \$0.54 | \$0.60 | \$0.46 |
| 2006 | \$0.50 | \$0.47 | \$0.50 | \$0.10 | \$0.16 | \$0.21 | \$0.13 |
| 2007 | (\$1.88) | (\$1.72) | (\$1.91) | (\$0.52) | (\$0.66) | (\$0.81) | (\$0.55) |
| 2008 | \$3.67 | \$3.91 | \$4.17 | \$2.54 | \$2.62 | \$2.70 | \$2.63 |
| 2009 | (\$0.62) | (\$0.55) | (\$0.34) | (\$0.52) | (\$0.58) | (\$0.64) | (\$0.92) |
| 2010 | (\$1.36) | (\$1.36) | (\$1.46) | (\$0.90) | (\$1.01) | (\$1.12) | (\$0.52) |
| 2011 | \$1.87 | \$1.93 | \$1.67 | \$0.63 | \$0.71 | \$0.78 | \$0.77 |
| 2012 | (\$1.95) | (\$1.36) | (\$2.07) | (\$0.39) | (\$0.51) | (\$0.65) | (\$0.88) |
| 2013 | (\$0.18) | (\$0.27) | (\$0.33) | (\$0.57) | (\$0.63) | (\$0.68) | (\$0.39) |
| 2014 | \$1.64 | \$1.73 | \$2.22 | \$1.63 | \$1.71 | \$1.77 | \$1.62 |
| 2015 | \$0.57 | \$0.49 | \$0.54 | \$0.08 | \$0.14 | \$0.20 | \$0.02 |
| 2016 | \$0.29 | \$0.56 | \$0.91 | \$0.64 | \$0.64 | \$0.65 | \$0.53 |
| 2017 | \$0.20 | \$0.07 | (\$0.08) | (\$0.44) | (\$0.42) | (\$0.39) | (\$0.30) |
| 2018 | \$0.97 | \$0.86 | \$1.19 | \$0.65 | \$0.71 | \$0.78 | \$0.66 |
| Average | \$0.23 | \$0.28 | \$0.35 | \$0.21 | \$0.21 | \$0.22 | \$0.17 |

## Central Indiana Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-of-money call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.27 | \$0.23 | \$0.33 | \$0.23 | \$0.27 | \$0.29 | \$0.24 |
|  | 1986 | \$0.30 | \$0.23 | \$0.29 | \$0.17 | \$0.20 | \$0.23 | \$0.18 |
|  | 1987 | (\$0.05) | (\$0.03) | \$0.09 | \$0.04 | \$0.04 | \$0.04 | (\$0.01) |
|  | 1988 | (\$0.49) | (\$0.28) | (\$0.31) | \$0.39 | \$0.29 | \$0.19 | (\$0.03) |
|  | 1989 | \$0.09 | \$0.04 | \$0.09 | (\$0.07) | (\$0.05) | (\$0.03) | (\$0.06) |
|  | 1990 | \$0.27 | \$0.30 | \$0.40 | \$0.23 | \$0.27 | \$0.29 | \$0.24 |
|  | 1991 | \$0.07 | \$0.05 | \$0.05 | (\$0.11) | (\$0.09) | (\$0.07) | (\$0.08) |
|  | 1992 | \$0.34 | \$0.31 | \$0.37 | \$0.22 | \$0.24 | \$0.27 | \$0.23 |
|  | 1993 | (\$0.13) | (\$0.12) | (\$0.13) | (\$0.14) | (\$0.18) | (\$0.20) | (\$0.14) |
|  | 1994 | \$0.29 | \$0.24 | \$0.28 | \$0.11 | \$0.14 | \$0.16 | \$0.14 |
|  | 1995 | (\$0.61) | (\$0.55) | (\$0.57) | (\$0.14) | (\$0.22) | (\$0.31) | (\$0.22) |
|  | 1996 | \$0.66 | \$0.77 | \$0.79 | \$0.46 | \$0.50 | \$0.53 | \$0.49 |
|  | 1997 | (\$0.24) | (\$0.24) | (\$0.22) | (\$0.22) | (\$0.25) | (\$0.28) | (\$0.15) |
|  | 1998 | \$0.29 | \$0.22 | \$0.35 | \$0.16 | \$0.19 | \$0.21 | \$0.16 |
|  | 1999 | \$0.28 | \$0.26 | \$0.29 | \$0.10 | \$0.14 | \$0.16 | \$0.12 |
|  | 2000 | \$0.24 | \$0.20 | \$0.35 | \$0.14 | \$0.17 | \$0.20 | \$0.15 |
|  | 2001 | \$0.22 | \$0.17 | \$0.12 | (\$0.05) | (\$0.02) | \$0.01 | \$0.00 |
|  | 2002 | (\$0.22) | (\$0.20) | (\$0.39) | (\$0.26) | (\$0.32) | (\$0.38) | (\$0.19) |
|  | 2003 | (\$0.00) | (\$0.02) | \$0.07 | (\$0.05) | (\$0.04) | (\$0.03) | (\$0.05) |
|  | 2004 | \$0.58 | \$0.60 | \$0.80 | \$0.56 | \$0.59 | \$0.61 | \$0.57 |
|  | 2005 | \$0.28 | \$0.29 | \$0.27 | \$0.08 | \$0.11 | \$0.14 | \$0.10 |
|  | 2006 | (\$0.66) | (\$0.63) | (\$0.61) | (\$0.30) | (\$0.36) | (\$0.42) | (\$0.23) |
|  | 2007 | \$0.32 | \$0.27 | \$0.31 | (\$0.08) | (\$0.05) | (\$0.03) | \$0.01 |
|  | 2008 | \$2.16 | \$2.45 | \$2.86 | \$2.13 | \$2.16 | \$2.20 | \$1.70 |
|  | 2009 | \$0.14 | \$0.07 | \$0.36 | \$0.25 | \$0.24 | \$0.24 | (\$0.09) |
|  | 2010 | (\$1.15) | (\$1.19) | (\$1.28) | (\$0.48) | (\$0.54) | (\$0.60) | (\$0.40) |
|  | 2011 | (\$0.13) | \$0.10 | (\$0.10) | (\$0.47) | (\$0.49) | (\$0.50) | (\$0.56) |
|  | 2012 | (\$2.44) | (\$2.21) | (\$3.67) | (\$0.89) | (\$0.99) | (\$1.09) | (\$0.40) |
|  | 2013 | \$0.81 | \$0.69 | \$0.91 | \$0.41 | \$0.45 | \$0.49 | \$0.52 |
|  | $\begin{aligned} & 2014 \\ & 2015 \end{aligned}$ | $\begin{aligned} & \$ 0.78 \\ & \$ 0.02 \end{aligned}$ | $\begin{gathered} \$ 0.75 \\ (\$ 0.04) \end{gathered}$ | $\begin{gathered} \$ 1.11 \\ (\$ 0.10) \end{gathered}$ | $\begin{gathered} \$ 0.80 \\ (\$ 0.26) \end{gathered}$ | $\begin{gathered} \$ 0.83 \\ (\$ 0.27) \end{gathered}$ | $\begin{gathered} \$ 0.86 \\ (\$ 0.27) \end{gathered}$ | $\begin{gathered} \$ 0.80 \\ (\$ 0.22) \end{gathered}$ |
|  | 2016 | \$0.40 | \$0.38 | \$0.51 | \$0.23 | \$0.26 | \$0.29 | \$0.22 |
|  | 2017 | \$0.33 | \$0.31 | \$0.34 | \$0.07 | \$0.10 | \$0.13 | \$0.13 |
|  | 2018 | \$0.26 | \$0.26 | \$0.36 | \$0.08 | \$0.12 | \$0.14 | \$0.11 |
| Average |  | \$0.097 | \$0.107 | \$0.127 | \$0.098 | \$0.101 | \$0.103 | \$0.097 |

## Central Indiana Soybean Selling Strategies Results

|  |  | Sell average $1 / 1$. 9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell <br> futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-of-money call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.64 | \$0.55 | \$0.71 | \$0.46 | \$0.54 | \$0.59 | \$0.48 |
|  | 1986 | \$0.32 | \$0.26 | \$0.30 | \$0.02 | \$0.12 | \$0.17 | \$0.08 |
|  | 1987 | (\$0.11) | \$0.01 | \$0.31 | \$0.26 | \$0.22 | \$0.20 | (\$0.01) |
|  | 1988 | (\$0.81) | (\$0.23) | (\$0.10) | \$0.86 | \$0.66 | \$0.46 | \$0.03 |
|  | 1989 | \$1.21 | \$1.05 | \$1.29 | \$0.78 | \$0.88 | \$0.95 | \$0.85 |
|  | 1990 | \$0.09 | \$0.15 | \$0.25 | (\$0.01) | \$0.03 | \$0.08 | (\$0.05) |
|  | 1991 | \$0.15 | \$0.09 | \$0.20 | (\$0.09) | (\$0.02) | \$0.03 | (\$0.05) |
|  | 1992 | \$0.59 | \$0.58 | \$0.77 | \$0.40 | \$0.47 | \$0.52 | \$0.43 |
|  | 1993 | \$0.09 | \$0.18 | \$0.02 | (\$0.09) | (\$0.15) | (\$0.15) | (\$0.20) |
|  | 1994 | \$0.82 | \$0.74 | \$0.82 | \$0.50 | \$0.56 | \$0.60 | \$0.53 |
|  | 1995 | (\$0.39) | (\$0.32) | (\$0.33) | (\$0.36) | (\$0.50) | (\$0.53) | (\$0.37) |
|  | 1996 | \$0.67 | \$0.81 | \$0.93 | \$0.39 | \$0.47 | \$0.54 | \$0.36 |
|  | 1997 | (\$0.03) | (\$0.08) | \$0.11 | (\$0.23) | (\$0.19) | (\$0.15) | (\$0.17) |
|  | 1998 | \$0.74 | \$0.57 | \$0.89 | \$0.50 | \$0.58 | \$0.64 | \$0.50 |
|  | 1999 | (\$0.01) | (\$0.16) | (\$0.11) | (\$0.26) | (\$0.28) | (\$0.27) | (\$0.19) |
|  | 2000 | \$0.30 | \$0.28 | \$0.52 | \$0.11 | \$0.18 | \$0.24 | \$0.19 |
|  | 2001 | \$0.24 | \$0.21 | (\$0.04) | (\$0.25) | (\$0.24) | (\$0.21) | (\$0.20) |
|  | 2002 | (\$0.50) | (\$0.37) | (\$0.72) | (\$0.21) | (\$0.34) | (\$0.48) | (\$0.31) |
|  | 2003 | (\$2.11) | (\$2.04) | (\$1.95) | (\$0.18) | (\$0.36) | (\$0.55) | (\$0.39) |
|  | 2004 | \$1.28 | \$1.33 | \$1.79 | \$1.25 | \$1.32 | \$1.36 | \$1.20 |
|  | 2005 | \$0.58 | \$0.83 | \$0.93 | \$0.46 | \$0.53 | \$0.58 | \$0.45 |
|  | 2006 | \$0.42 | \$0.40 | \$0.43 | \$0.04 | \$0.09 | \$0.14 | \$0.07 |
|  | 2007 | (\$1.82) | (\$1.67) | (\$1.85) | (\$0.51) | (\$0.64) | (\$0.78) | (\$0.53) |
|  | 2008 | \$3.97 | \$4.22 | \$4.50 | \$2.74 | \$2.83 | \$2.91 | \$2.84 |
|  | 2009 | (\$0.59) | (\$0.52) | (\$0.32) | (\$0.50) | (\$0.56) | (\$0.61) | (\$0.89) |
|  | 2010 | (\$1.37) | (\$1.37) | (\$1.48) | (\$0.51) | (\$0.63) | (\$0.76) | (\$0.57) |
|  | 2011 | \$0.97 | \$1.04 | \$0.77 | (\$0.30) | (\$0.23) | (\$0.17) | (\$0.17) |
|  | 2012 | (\$1.88) | (\$1.30) | (\$1.99) | (\$0.39) | (\$0.51) | (\$0.65) | (\$0.88) |
|  | 2013 | (\$0.07) | (\$0.16) | (\$0.22) | (\$0.43) | (\$0.51) | (\$0.57) | (\$0.41) |
|  | 2014 | \$1.68 | \$1.77 | \$2.27 | \$1.67 | \$1.75 | \$1.82 | \$1.66 |
|  | 2015 | \$0.64 | \$0.56 | \$0.61 | \$0.09 | \$0.16 | \$0.23 | \$0.02 |
|  | 2016 | \$0.29 | \$0.57 | \$0.93 | \$0.64 | \$0.65 | \$0.66 | \$0.54 |
|  | 2017 | \$0.10 | (\$0.03) | (\$0.19) | (\$0.54) | (\$0.53) | (\$0.51) | (\$0.34) |
|  | 2018 | \$1.08 | \$0.97 | \$1.31 | \$0.75 | \$0.82 | \$0.89 | \$0.77 |
| Average |  | \$0.21 | \$0.26 | \$0.33 | \$0.21 | \$0.21 | \$0.21 | \$0.16 |

## Cincinnati Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell <br> Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.27 | \$0.23 | \$0.33 | \$0.23 | \$0.26 | \$0.28 | \$0.23 |
|  | 1986 | \$0.23 | \$0.17 | \$0.22 | \$0.10 | \$0.14 | \$0.16 | \$0.12 |
|  | 1987 | (\$0.06) | (\$0.04) | \$0.10 | \$0.04 | \$0.04 | \$0.04 | (\$0.01) |
|  | 1988 | (\$0.32) | (\$0.11) | (\$0.14) | \$0.38 | \$0.28 | \$0.18 | \$0.03 |
|  | 1989 | \$0.15 | \$0.09 | \$0.15 | (\$0.05) | (\$0.02) | \$0.01 | (\$0.04) |
|  | 1990 | \$0.28 | \$0.32 | \$0.42 | \$0.25 | \$0.28 | \$0.31 | \$0.25 |
|  | 1991 | (\$0.01) | (\$0.02) | (\$0.02) | (\$0.15) | (\$0.15) | (\$0.13) | (\$0.12) |
|  | 1992 | \$0.29 | \$0.26 | \$0.33 | \$0.16 | \$0.19 | \$0.22 | \$0.17 |
|  | 1993 | (\$0.15) | (\$0.15) | (\$0.15) | (\$0.16) | (\$0.21) | (\$0.23) | (\$0.16) |
|  | 1994 | \$0.28 | \$0.23 | \$0.27 | \$0.11 | \$0.13 | \$0.16 | \$0.13 |
|  | 1995 | (\$0.66) | (\$0.60) | (\$0.61) | (\$0.12) | (\$0.19) | (\$0.27) | (\$0.19) |
|  | 1996 | \$0.72 | \$0.83 | \$0.86 | \$0.51 | \$0.55 | \$0.58 | \$0.53 |
|  | 1997 | (\$0.16) | (\$0.16) | (\$0.15) | (\$0.19) | (\$0.21) | (\$0.22) | (\$0.12) |
|  | 1998 | \$0.33 | \$0.26 | \$0.38 | \$0.20 | \$0.23 | \$0.25 | \$0.20 |
|  | 1999 | \$0.31 | \$0.28 | \$0.32 | \$0.13 | \$0.16 | \$0.19 | \$0.14 |
|  | 2000 | \$0.28 | \$0.24 | \$0.39 | \$0.19 | \$0.22 | \$0.24 | \$0.19 |
|  | 2001 | \$0.28 | \$0.22 | \$0.16 | (\$0.03) | \$0.01 | \$0.04 | \$0.03 |
|  | 2002 | (\$0.22) | (\$0.21) | (\$0.45) | (\$0.35) | (\$0.43) | (\$0.50) | (\$0.25) |
|  | 2003 | (\$0.10) | (\$0.12) | (\$0.04) | (\$0.11) | (\$0.11) | (\$0.11) | (\$0.12) |
|  | 2004 | \$0.60 | \$0.61 | \$0.82 | \$0.57 | \$0.60 | \$0.63 | \$0.58 |
|  | 2005 | \$0.36 | \$0.37 | \$0.35 | \$0.15 | \$0.19 | \$0.22 | \$0.16 |
|  | 2006 | (\$0.78) | (\$0.75) | (\$0.73) | (\$0.28) | (\$0.34) | (\$0.40) | (\$0.22) |
|  | 2007 | \$0.20 | \$0.15 | \$0.18 | (\$0.21) | (\$0.18) | (\$0.15) | (\$0.11) |
|  | 2008 | \$2.54 | \$2.88 | \$3.36 | \$2.50 | \$2.54 | \$2.59 | \$2.00 |
|  | 2009 | \$0.04 | (\$0.02) | \$0.25 | \$0.12 | \$0.12 | \$0.12 | (\$0.15) |
|  | 2010 | (\$0.90) | (\$0.94) | (\$1.02) | \$0.33 | \$0.28 | \$0.22 | (\$0.37) |
|  | 2011 | (\$0.06) | \$0.15 | (\$0.03) | (\$0.48) | (\$0.49) | (\$0.50) | (\$0.58) |
|  | 2012 | (\$2.01) | (\$1.83) | (\$3.00) | (\$0.72) | (\$0.79) | (\$0.88) | (\$0.31) |
|  | 2013 | \$0.82 | \$0.70 | \$0.92 | \$0.41 | \$0.45 | \$0.49 | \$0.55 |
|  | 2014 | \$0.63 | \$0.60 | \$0.99 | \$0.65 | \$0.69 | \$0.72 | \$0.65 |
|  | 2015 | \$0.20 | \$0.15 | \$0.08 | (\$0.18) | (\$0.16) | (\$0.14) | (\$0.15) |
|  | 2016 | \$0.22 | \$0.20 | \$0.34 | \$0.04 | \$0.08 | \$0.11 | \$0.04 |
|  | 2017 | \$0.31 | \$0.28 | \$0.31 | \$0.04 | \$0.07 | \$0.10 | \$0.11 |
|  | 2018 | \$0.14 | \$0.14 | \$0.23 | (\$0.02) | \$0.01 | \$0.04 | \$0.01 |
| Average |  | \$0.119 | \$0.129 | \$0.159 | \$0.120 | \$0.124 | \$0.128 | \$0.095 |

## Cincinnati Soybean Selling Strategies Results

|  |  | Sell average $1 / 1$. 9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.60 | \$0.52 | \$0.67 | \$0.43 | \$0.51 | \$0.56 | \$0.45 |
|  | 1986 | \$0.28 | \$0.22 | \$0.26 | \$0.02 | \$0.10 | \$0.15 | \$0.07 |
|  | 1987 | (\$0.30) | (\$0.18) | \$0.13 | \$0.20 | \$0.12 | \$0.07 | (\$0.13) |
|  | 1988 | (\$0.78) | (\$0.21) | (\$0.08) | \$0.84 | \$0.64 | \$0.45 | \$0.03 |
|  | 1989 | \$1.35 | \$1.17 | \$1.44 | \$0.87 | \$0.98 | \$1.06 | \$0.94 |
|  | 1990 | \$0.09 | \$0.15 | \$0.25 | (\$0.01) | \$0.03 | \$0.08 | (\$0.05) |
|  | 1991 | \$0.16 | \$0.10 | \$0.21 | (\$0.09) | (\$0.02) | \$0.03 | (\$0.05) |
|  | 1992 | \$0.61 | \$0.60 | \$0.79 | \$0.41 | \$0.49 | \$0.54 | \$0.44 |
|  | 1993 | \$0.10 | \$0.20 | \$0.03 | (\$0.10) | (\$0.17) | (\$0.17) | (\$0.23) |
|  | 1994 | \$0.83 | \$0.75 | \$0.83 | \$0.50 | \$0.57 | \$0.61 | \$0.54 |
|  | 1995 | (\$0.38) | (\$0.32) | (\$0.33) | (\$0.36) | (\$0.49) | (\$0.52) | (\$0.36) |
|  | 1996 | \$0.69 | \$0.82 | \$0.96 | \$0.40 | \$0.49 | \$0.55 | \$0.37 |
|  | 1997 | (\$0.03) | (\$0.08) | \$0.11 | (\$0.22) | (\$0.18) | (\$0.14) | (\$0.16) |
|  | 1998 | \$0.91 | \$0.75 | \$1.04 | \$0.69 | \$0.76 | \$0.82 | \$0.69 |
|  | 1999 | (\$0.01) | (\$0.16) | (\$0.11) | (\$0.27) | (\$0.29) | (\$0.28) | (\$0.19) |
|  | 2000 | \$0.41 | \$0.40 | \$0.65 | \$0.20 | \$0.29 | \$0.35 | \$0.26 |
|  | 2001 | \$0.10 | \$0.06 | (\$0.22) | (\$0.34) | (\$0.38) | (\$0.38) | (\$0.26) |
|  | 2002 | (\$0.61) | (\$0.45) | (\$0.87) | (\$0.26) | (\$0.42) | (\$0.59) | (\$0.38) |
|  | 2003 | (\$1.84) | (\$1.78) | (\$1.69) | (\$0.16) | (\$0.31) | (\$0.48) | (\$0.34) |
|  | 2004 | \$1.27 | \$1.31 | \$1.76 | \$1.24 | \$1.31 | \$1.35 | \$1.19 |
|  | 2005 | \$0.56 | \$0.80 | \$0.90 | \$0.45 | \$0.51 | \$0.56 | \$0.43 |
|  | 2006 | \$0.02 | (\$0.01) | \$0.03 | (\$0.27) | (\$0.26) | (\$0.24) | (\$0.20) |
|  | 2007 | (\$1.25) | (\$1.11) | (\$1.28) | (\$0.45) | (\$0.57) | (\$0.69) | (\$0.47) |
|  | 2008 | \$4.62 | \$4.92 | \$5.24 | \$3.19 | \$3.29 | \$3.39 | \$3.31 |
|  | 2009 | (\$0.41) | (\$0.35) | (\$0.16) | (\$0.40) | (\$0.44) | (\$0.49) | (\$0.72) |
|  | 2010 | (\$1.38) | (\$1.38) | (\$1.48) | (\$0.92) | (\$1.02) | (\$1.14) | (\$0.53) |
|  | 2011 | \$1.17 | \$1.23 | \$0.99 | (\$0.01) | \$0.07 | \$0.14 | \$0.12 |
|  | 2012 | (\$1.77) | (\$1.23) | (\$1.88) | (\$0.36) | (\$0.48) | (\$0.61) | (\$0.83) |
|  | 2013 | (\$0.05) | (\$0.13) | (\$0.19) | (\$0.39) | (\$0.44) | (\$0.48) | (\$0.43) |
|  | 2014 | \$1.72 | \$1.82 | \$2.33 | \$1.71 | \$1.79 | \$1.86 | \$1.71 |
|  | 2015 | \$0.62 | \$0.54 | \$0.59 | \$0.09 | \$0.15 | \$0.22 | \$0.02 |
|  | 2016 | \$0.30 | \$0.59 | \$0.96 | \$0.67 | \$0.67 | \$0.68 | \$0.56 |
|  | 2017 | \$0.11 | (\$0.04) | (\$0.20) | (\$0.58) | (\$0.57) | (\$0.54) | (\$0.36) |
|  | 2018 | \$1.29 | \$1.16 | \$1.56 | \$0.90 | \$0.97 | \$1.06 | \$0.91 |
| Average |  | \$0.27 | \$0.31 | \$0.39 | \$0.22 | \$0.23 | \$0.23 | \$0.19 |

Denver Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.27 | \$0.23 | \$0.33 | \$0.22 | \$0.26 | \$0.29 | \$0.23 |
|  | 1986 | \$0.20 | \$0.13 | \$0.19 | \$0.06 | \$0.10 | \$0.13 | \$0.08 |
|  | 1987 | (\$0.02) | (\$0.00) | \$0.12 | \$0.04 | \$0.05 | \$0.06 | \$0.01 |
|  | 1988 | (\$0.20) | (\$0.07) | (\$0.09) | \$0.24 | \$0.18 | \$0.12 | \$0.02 |
|  | 1989 | \$0.11 | \$0.05 | \$0.11 | (\$0.09) | (\$0.06) | (\$0.04) | (\$0.08) |
|  | 1990 | \$0.29 | \$0.32 | \$0.43 | \$0.25 | \$0.29 | \$0.32 | \$0.25 |
|  | 1991 | \$0.03 | \$0.01 | \$0.02 | (\$0.12) | (\$0.11) | (\$0.09) | (\$0.10) |
|  | 1992 | \$0.51 | \$0.46 | \$0.55 | \$0.33 | \$0.37 | \$0.40 | \$0.35 |
|  | 1993 | (\$0.33) | (\$0.33) | (\$0.34) | (\$0.20) | (\$0.29) | (\$0.37) | (\$0.20) |
|  | 1994 | \$0.37 | \$0.30 | \$0.35 | \$0.15 | \$0.19 | \$0.21 | \$0.19 |
|  | 1995 | (\$0.88) | (\$0.81) | (\$0.82) | (\$0.17) | (\$0.27) | (\$0.38) | (\$0.27) |
|  | 1996 | \$0.48 | \$0.59 | \$0.61 | \$0.28 | \$0.32 | \$0.35 | \$0.30 |
|  | 1997 | (\$0.22) | (\$0.22) | (\$0.20) | (\$0.20) | (\$0.23) | (\$0.25) | (\$0.13) |
|  | 1998 | \$0.31 | \$0.23 | \$0.37 | \$0.17 | \$0.20 | \$0.23 | \$0.17 |
|  | 1999 | \$0.32 | \$0.29 | \$0.33 | \$0.14 | \$0.17 | \$0.20 | \$0.15 |
|  | 2000 | \$0.29 | \$0.24 | \$0.43 | \$0.17 | \$0.21 | \$0.25 | \$0.19 |
|  | 2001 | \$0.25 | \$0.19 | \$0.13 | (\$0.06) | (\$0.02) | \$0.01 | \$0.01 |
|  | 2002 | (\$0.13) | (\$0.12) | (\$0.26) | (\$0.20) | (\$0.25) | (\$0.28) | (\$0.14) |
|  | 2003 | \$0.22 | \$0.20 | \$0.29 | \$0.12 | \$0.14 | \$0.16 | \$0.12 |
|  | 2004 | \$0.84 | \$0.86 | \$1.13 | \$0.81 | \$0.85 | \$0.88 | \$0.82 |
|  | 2005 | \$0.33 | \$0.34 | \$0.32 | \$0.14 | \$0.17 | \$0.20 | \$0.15 |
|  | 2006 | (\$0.59) | (\$0.57) | (\$0.54) | (\$0.26) | (\$0.32) | (\$0.37) | (\$0.21) |
|  | 2007 | \$0.18 | \$0.13 | \$0.17 | (\$0.20) | (\$0.18) | (\$0.16) | (\$0.11) |
|  | 2008 | \$2.15 | \$2.44 | \$2.85 | \$2.12 | \$2.16 | \$2.19 | \$1.70 |
|  | 2009 | \$0.25 | \$0.19 | \$0.47 | \$0.30 | \$0.31 | \$0.32 | \$0.10 |
|  | 2010 | (\$1.63) | (\$1.67) | (\$1.75) | (\$0.40) | (\$0.46) | (\$0.52) | (\$0.36) |
|  | 2011 | (\$0.13) | \$0.09 | (\$0.09) | (\$0.45) | (\$0.47) | (\$0.48) | (\$0.54) |
|  | 2012 | (\$1.67) | (\$1.52) | (\$2.49) | (\$0.60) | (\$0.66) | (\$0.73) | (\$0.26) |
|  | 2013 | \$1.04 | \$0.88 | \$1.16 | \$0.52 | \$0.57 | \$0.62 | \$0.70 |
|  | 2014 | \$0.88 | \$0.86 | \$1.27 | \$0.91 | \$0.95 | \$0.98 | \$0.91 |
|  | 2015 | \$0.22 | \$0.17 | \$0.11 | (\$0.16) | (\$0.14) | (\$0.12) | (\$0.15) |
|  | 2016 | \$0.22 | \$0.19 | \$0.34 | \$0.04 | \$0.08 | \$0.11 | \$0.04 |
|  | 2017 | \$0.39 | \$0.37 | \$0.40 | \$0.11 | \$0.15 | \$0.18 | \$0.14 |
|  | 2018 | \$0.22 | \$0.22 | \$0.33 | \$0.03 | \$0.07 | \$0.10 | \$0.06 |
| Average |  | \$0.134 | \$0.137 | \$0.183 | \$0.119 | \$0.128 | \$0.133 | \$0.122 |

## Evansville Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.27 | \$0.23 | \$0.33 | \$0.23 | \$0.27 | \$0.29 | \$0.24 |
|  | 1986 | \$0.30 | \$0.23 | \$0.29 | \$0.17 | \$0.20 | \$0.23 | \$0.18 |
|  | 1987 | (\$0.05) | (\$0.03) | \$0.09 | \$0.04 | \$0.04 | \$0.04 | (\$0.01) |
|  | 1988 | (\$0.49) | (\$0.28) | (\$0.31) | \$0.39 | \$0.29 | \$0.19 | (\$0.03) |
|  | 1989 | \$0.09 | \$0.04 | \$0.09 | (\$0.07) | (\$0.05) | (\$0.03) | (\$0.06) |
|  | 1990 | \$0.27 | \$0.30 | \$0.40 | \$0.23 | \$0.27 | \$0.29 | \$0.24 |
|  | 1991 | \$0.07 | \$0.05 | \$0.05 | (\$0.11) | (\$0.09) | (\$0.07) | (\$0.08) |
|  | 1992 | \$0.34 | \$0.31 | \$0.37 | \$0.22 | \$0.24 | \$0.27 | \$0.23 |
|  | 1993 | (\$0.13) | (\$0.12) | (\$0.13) | (\$0.14) | (\$0.18) | (\$0.20) | (\$0.14) |
|  | 1994 | \$0.29 | \$0.24 | \$0.28 | \$0.11 | \$0.14 | \$0.16 | \$0.14 |
|  | 1995 | (\$0.61) | (\$0.55) | (\$0.57) | (\$0.14) | (\$0.22) | (\$0.31) | (\$0.22) |
|  | 1996 | \$0.66 | \$0.77 | \$0.79 | \$0.46 | \$0.50 | \$0.53 | \$0.49 |
|  | 1997 | (\$0.24) | (\$0.24) | (\$0.22) | (\$0.22) | (\$0.25) | (\$0.28) | (\$0.15) |
|  | 1998 | \$0.29 | \$0.22 | \$0.35 | \$0.16 | \$0.19 | \$0.21 | \$0.16 |
|  | 1999 | \$0.28 | \$0.26 | \$0.29 | \$0.10 | \$0.14 | \$0.16 | \$0.12 |
|  | 2000 | \$0.24 | \$0.20 | \$0.35 | \$0.14 | \$0.17 | \$0.20 | \$0.15 |
|  | 2001 | \$0.22 | \$0.17 | \$0.12 | (\$0.05) | (\$0.02) | \$0.01 | \$0.00 |
|  | 2002 | (\$0.22) | (\$0.20) | (\$0.39) | (\$0.26) | (\$0.32) | (\$0.38) | (\$0.19) |
|  | 2003 | (\$0.00) | (\$0.02) | \$0.07 | (\$0.05) | (\$0.04) | (\$0.03) | (\$0.05) |
|  | 2004 | \$0.58 | \$0.60 | \$0.80 | \$0.56 | \$0.59 | \$0.61 | \$0.57 |
|  | 2005 | \$0.28 | \$0.29 | \$0.27 | \$0.08 | \$0.11 | \$0.14 | \$0.10 |
|  | 2006 | (\$0.66) | (\$0.63) | (\$0.61) | (\$0.30) | (\$0.36) | (\$0.42) | (\$0.23) |
|  | 2007 | \$0.32 | \$0.27 | \$0.31 | (\$0.08) | (\$0.05) | (\$0.03) | \$0.01 |
|  | 2008 | \$2.16 | \$2.45 | \$2.86 | \$2.13 | \$2.16 | \$2.20 | \$1.70 |
|  | 2009 | \$0.14 | \$0.07 | \$0.36 | \$0.25 | \$0.24 | \$0.24 | (\$0.09) |
|  | 2010 | (\$1.15) | (\$1.19) | (\$1.28) | (\$0.48) | (\$0.54) | (\$0.60) | (\$0.40) |
|  | 2011 | (\$0.13) | \$0.10 | (\$0.10) | (\$0.47) | (\$0.49) | (\$0.50) | (\$0.56) |
|  | 2012 | (\$2.44) | (\$2.21) | (\$3.67) | (\$0.89) | (\$0.99) | (\$1.09) | (\$0.40) |
|  | 2013 | \$0.81 | \$0.69 | \$0.91 | \$0.41 | \$0.45 | \$0.49 | \$0.52 |
|  | $\begin{aligned} & 2014 \\ & 2015 \end{aligned}$ | \$0.78 | $\begin{aligned} & \$ 0.75 \\ & (\$ 0.04) \end{aligned}$ | $\begin{gathered} \$ 1.11 \\ (\$ 0.10) \end{gathered}$ | $\begin{gathered} \$ 0.80 \\ (\$ 0.26) \end{gathered}$ | $\begin{gathered} \$ 0.83 \\ (\$ 0.27) \end{gathered}$ | $\begin{gathered} \$ 0.86 \\ (\$ 0.27) \end{gathered}$ | $\begin{gathered} \$ 0.80 \\ (\$ 0.22) \end{gathered}$ |
|  | 2016 | \$0.40 | \$0.38 | \$0.51 | \$0.23 | \$0.26 | \$0.29 | \$0.22 |
|  | 2017 | \$0.33 | \$0.31 | \$0.34 | \$0.07 | \$0.10 | \$0.13 | \$0.13 |
|  | 2018 | \$0.26 | \$0.26 | \$0.36 | \$0.08 | \$0.12 | \$0.14 | \$0.11 |
| Average |  | \$0.097 | \$0.107 | \$0.127 | \$0.098 | \$0.101 | \$0.103 | \$0.097 |

## Garden City, KS Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.24 | \$0.20 | \$0.31 | \$0.20 | \$0.23 | \$0.26 | \$0.20 |
|  | 1986 | \$0.19 | \$0.13 | \$0.19 | \$0.07 | \$0.10 | \$0.13 | \$0.08 |
|  | 1987 | \$0.04 | \$0.06 | \$0.21 | \$0.11 | \$0.13 | \$0.14 | \$0.07 |
|  | 1988 | (\$0.40) | (\$0.25) | (\$0.27) | \$0.27 | \$0.20 | \$0.13 | (\$0.03) |
|  | 1989 | \$0.13 | \$0.07 | \$0.12 | (\$0.06) | (\$0.04) | (\$0.01) | (\$0.05) |
|  | 1990 | \$0.31 | \$0.35 | \$0.46 | \$0.28 | \$0.32 | \$0.34 | \$0.28 |
|  | 1991 | (\$0.03) | (\$0.04) | (\$0.04) | (\$0.13) | (\$0.13) | (\$0.12) | (\$0.10) |
|  | 1992 | \$0.35 | \$0.31 | \$0.38 | \$0.21 | \$0.24 | \$0.26 | \$0.22 |
|  | 1993 | (\$0.02) | (\$0.01) | (\$0.02) | (\$0.12) | (\$0.12) | (\$0.12) | (\$0.11) |
|  | 1994 | \$0.32 | \$0.26 | \$0.31 | \$0.13 | \$0.16 | \$0.18 | \$0.16 |
|  | 1995 | (\$0.60) | (\$0.55) | (\$0.56) | (\$0.14) | (\$0.22) | (\$0.30) | (\$0.22) |
|  | 1996 | \$0.36 | \$0.45 | \$0.47 | \$0.19 | \$0.22 | \$0.25 | \$0.21 |
|  | 1997 | \$0.09 | \$0.08 | \$0.10 | (\$0.06) | (\$0.04) | (\$0.02) | (\$0.00) |
|  | 1998 | \$0.49 | \$0.41 | \$0.55 | \$0.35 | \$0.38 | \$0.41 | \$0.35 |
|  | 1999 | \$0.29 | \$0.26 | \$0.30 | \$0.11 | \$0.14 | \$0.17 | \$0.13 |
|  | 2000 | \$0.50 | \$0.45 | \$0.63 | \$0.38 | \$0.42 | \$0.45 | \$0.39 |
|  | 2001 | \$0.18 | \$0.11 | \$0.05 | (\$0.14) | (\$0.11) | (\$0.09) | (\$0.06) |
|  | 2002 | (\$0.31) | (\$0.30) | (\$0.49) | (\$0.27) | (\$0.34) | (\$0.39) | (\$0.20) |
|  | 2003 | \$0.10 | \$0.08 | \$0.18 | \$0.02 | \$0.04 | \$0.05 | \$0.02 |
|  | 2004 | \$0.62 | \$0.63 | \$0.85 | \$0.59 | \$0.62 | \$0.65 | \$0.60 |
|  | 2005 | \$0.31 | \$0.33 | \$0.31 | \$0.11 | \$0.14 | \$0.17 | \$0.13 |
|  | 2006 | (\$0.06) | (\$0.03) | \$0.00 | (\$0.19) | (\$0.19) | (\$0.18) | (\$0.14) |
|  | 2007 | \$0.01 | (\$0.04) | (\$0.00) | (\$0.29) | (\$0.28) | (\$0.27) | (\$0.17) |
|  | 2008 | \$2.12 | \$2.41 | \$2.81 | \$2.09 | \$2.13 | \$2.16 | \$1.67 |
|  | 2009 | \$0.24 | \$0.18 | \$0.44 | \$0.28 | \$0.29 | \$0.30 | \$0.09 |
|  | 2010 | (\$1.19) | (\$1.23) | (\$1.32) | (\$0.50) | (\$0.56) | (\$0.62) | (\$0.41) |
|  | 2011 | \$0.09 | \$0.34 | \$0.13 | (\$0.26) | (\$0.27) | (\$0.27) | (\$0.32) |
|  | 2012 | (\$2.19) | (\$2.01) | (\$3.19) | (\$0.72) | (\$0.80) | (\$0.88) | (\$0.29) |
|  | 2013 | \$0.88 | \$0.75 | \$0.99 | \$0.44 | \$0.48 | \$0.53 | \$0.61 |
|  | $\begin{aligned} & 2014 \\ & 2015 \end{aligned}$ | \$0.98 $\$ 0.12$ | $\$ 0.95$ $\$ 0.08$ | $\begin{aligned} & \$ 1.29 \\ & \$ 0.03 \end{aligned}$ | $\begin{gathered} \$ 1.00 \\ (\$ 0.12) \end{gathered}$ | $\begin{gathered} \$ 1.03 \\ (\$ 0.12) \end{gathered}$ | $\begin{gathered} \$ 1.06 \\ (\$ 0.11) \end{gathered}$ | $\begin{gathered} \$ 1.00 \\ (\$ 0.10) \end{gathered}$ |
|  | 2016 | \$0.44 | \$0.42 | \$0.54 | \$0.28 | \$0.31 | \$0.34 | \$0.28 |
|  | 2017 | \$0.36 | \$0.33 | \$0.36 | \$0.08 | \$0.11 | \$0.14 | \$0.15 |
|  | 2018 | \$0.28 | \$0.28 | \$0.39 | \$0.09 | \$0.14 | \$0.16 | \$0.13 |
| Average |  | \$0.154 | \$0.161 | \$0.191 | \$0.126 | \$0.136 | \$0.144 | \$0.134 |

## Garden City, KS Soybean Selling Strategies Results

|  |  | Sell average $1 / 1$ 9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.57 | \$0.49 | \$0.64 | \$0.41 | \$0.48 | \$0.53 | \$0.43 |
|  | 1986 | \$0.24 | \$0.19 | \$0.23 | \$0.02 | \$0.09 | \$0.13 | \$0.06 |
|  | 1987 | (\$0.25) | (\$0.14) | \$0.12 | \$0.17 | \$0.10 | \$0.06 | (\$0.12) |
|  | 1988 | (\$0.70) | (\$0.20) | (\$0.08) | \$0.74 | \$0.57 | \$0.40 | \$0.03 |
|  | 1989 | \$1.19 | \$1.03 | \$1.26 | \$0.77 | \$0.86 | \$0.93 | \$0.83 |
|  | 1990 | (\$0.01) | \$0.07 | \$0.19 | (\$0.07) | (\$0.06) | (\$0.01) | (\$0.14) |
|  | 1991 | \$0.18 | \$0.11 | \$0.24 | (\$0.10) | (\$0.03) | \$0.03 | (\$0.06) |
|  | 1992 | \$0.46 | \$0.46 | \$0.60 | \$0.31 | \$0.37 | \$0.41 | \$0.33 |
|  | 1993 | \$0.04 | \$0.15 | (\$0.02) | (\$0.12) | (\$0.22) | (\$0.23) | (\$0.26) |
|  | 1994 | \$0.74 | \$0.67 | \$0.74 | \$0.45 | \$0.51 | \$0.55 | \$0.48 |
|  | 1995 | (\$0.60) | (\$0.54) | (\$0.55) | (\$0.41) | (\$0.62) | (\$0.74) | (\$0.43) |
|  | 1996 | \$0.47 | \$0.57 | \$0.66 | \$0.27 | \$0.33 | \$0.38 | \$0.25 |
|  | 1997 | (\$0.03) | (\$0.07) | \$0.10 | (\$0.20) | (\$0.16) | (\$0.13) | (\$0.15) |
|  | 1998 | \$0.61 | \$0.43 | \$0.76 | \$0.35 | \$0.44 | \$0.51 | \$0.36 |
|  | 1999 | (\$0.08) | (\$0.24) | (\$0.19) | (\$0.39) | (\$0.44) | (\$0.39) | (\$0.29) |
|  | 2000 | \$0.43 | \$0.40 | \$0.84 | \$0.12 | \$0.24 | \$0.34 | \$0.28 |
|  | 2001 | \$0.26 | \$0.22 | (\$0.05) | (\$0.27) | (\$0.26) | (\$0.22) | (\$0.21) |
|  | 2002 | (\$0.63) | (\$0.47) | (\$0.91) | (\$0.27) | (\$0.43) | (\$0.61) | (\$0.39) |
|  | 2003 | (\$2.99) | (\$2.92) | (\$2.81) | (\$0.20) | (\$0.39) | (\$0.60) | (\$0.43) |
|  | 2004 | \$1.05 | \$1.09 | \$1.46 | \$1.03 | \$1.08 | \$1.11 | \$0.98 |
|  | 2005 | \$0.50 | \$0.70 | \$0.80 | \$0.39 | \$0.45 | \$0.50 | \$0.38 |
|  | 2006 | \$0.44 | \$0.41 | \$0.44 | \$0.04 | \$0.09 | \$0.15 | \$0.07 |
|  | 2007 | (\$1.51) | (\$1.37) | (\$1.54) | (\$0.47) | (\$0.59) | (\$0.72) | (\$0.49) |
|  | 2008 | \$4.20 | \$4.41 | \$4.64 | \$3.19 | \$3.26 | \$3.33 | \$3.27 |
|  | 2009 | (\$0.46) | (\$0.41) | (\$0.25) | (\$0.39) | (\$0.43) | (\$0.48) | (\$0.69) |
|  | 2010 | (\$1.23) | (\$1.22) | (\$1.34) | \$0.57 | \$0.44 | \$0.29 | (\$0.63) |
|  | 2011 | \$2.39 | \$2.47 | \$2.14 | \$0.80 | \$0.91 | \$1.00 | \$0.98 |
|  | 2012 | (\$2.47) | (\$1.70) | (\$2.63) | (\$0.52) | (\$0.69) | (\$0.87) | (\$1.18) |
|  | 2013 | (\$0.07) | (\$0.15) | (\$0.21) | (\$0.41) | (\$0.48) | (\$0.54) | (\$0.38) |
|  | 2014 | \$1.78 | \$1.87 | \$2.40 | \$1.77 | \$1.85 | \$1.92 | \$1.76 |
|  | 2015 | \$0.39 | \$0.32 | \$0.36 | (\$0.10) | (\$0.04) | \$0.03 | (\$0.16) |
|  | 2016 | (\$0.03) | \$0.20 | \$0.49 | \$0.35 | \$0.35 | \$0.35 | \$0.24 |
|  | 2017 | (\$0.09) | (\$0.23) | (\$0.40) | (\$0.71) | (\$0.73) | (\$0.73) | (\$0.40) |
|  | 2018 | \$1.21 | \$1.09 | \$1.46 | \$0.85 | \$0.92 | \$1.00 | \$0.85 |
| Average |  | \$0.18 | \$0.23 | \$0.28 | \$0.23 | \$0.23 | \$0.23 | \$0.15 |

Kansas City Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.26 | \$0.22 | \$0.30 | \$0.22 | \$0.25 | \$0.27 | \$0.23 |
|  | 1986 | \$0.24 | \$0.19 | \$0.24 | \$0.14 | \$0.17 | \$0.19 | \$0.15 |
|  | 1987 | \$0.03 | \$0.05 | \$0.16 | \$0.09 | \$0.10 | \$0.11 | \$0.05 |
|  | 1988 | (\$0.50) | (\$0.32) | (\$0.34) | \$0.34 | \$0.26 | \$0.17 | (\$0.04) |
|  | 1989 | \$0.12 | \$0.07 | \$0.12 | (\$0.06) | (\$0.04) | (\$0.01) | (\$0.05) |
|  | 1990 | \$0.24 | \$0.27 | \$0.38 | \$0.21 | \$0.24 | \$0.27 | \$0.21 |
|  | 1991 | (\$0.03) | (\$0.04) | (\$0.04) | (\$0.13) | (\$0.12) | (\$0.12) | (\$0.10) |
|  | 1992 | \$0.33 | \$0.29 | \$0.36 | \$0.21 | \$0.23 | \$0.26 | \$0.22 |
|  | 1993 | (\$0.20) | (\$0.20) | (\$0.20) | (\$0.18) | (\$0.25) | (\$0.29) | (\$0.18) |
|  | 1994 | \$0.33 | \$0.27 | \$0.31 | \$0.14 | \$0.17 | \$0.19 | \$0.17 |
|  | 1995 | (\$0.60) | (\$0.54) | (\$0.55) | (\$0.14) | (\$0.22) | (\$0.30) | (\$0.21) |
|  | 1996 | \$0.33 | \$0.42 | \$0.44 | \$0.18 | \$0.20 | \$0.23 | \$0.19 |
|  | 1997 | \$0.09 | \$0.08 | \$0.10 | (\$0.06) | (\$0.04) | (\$0.02) | (\$0.00) |
|  | 1998 | \$0.56 | \$0.48 | \$0.62 | \$0.41 | \$0.44 | \$0.47 | \$0.41 |
|  | 1999 | \$0.29 | \$0.25 | \$0.29 | \$0.07 | \$0.11 | \$0.14 | \$0.09 |
|  | 2000 | \$0.37 | \$0.33 | \$0.47 | \$0.28 | \$0.31 | \$0.33 | \$0.29 |
|  | 2001 | \$0.15 | \$0.09 | \$0.04 | (\$0.11) | (\$0.09) | (\$0.07) | (\$0.05) |
|  | 2002 | (\$0.30) | (\$0.29) | (\$0.48) | (\$0.27) | (\$0.33) | (\$0.39) | (\$0.20) |
|  | 2003 | \$0.10 | \$0.08 | \$0.19 | \$0.02 | \$0.04 | \$0.05 | \$0.02 |
|  | 2004 | \$0.52 | \$0.54 | \$0.73 | \$0.50 | \$0.53 | \$0.55 | \$0.51 |
|  | 2005 | \$0.33 | \$0.34 | \$0.32 | \$0.09 | \$0.13 | \$0.16 | \$0.11 |
|  | 2006 | \$0.20 | \$0.23 | \$0.25 | \$0.04 | \$0.06 | \$0.09 | \$0.07 |
|  | 2007 | \$0.17 | \$0.12 | \$0.16 | (\$0.17) | (\$0.15) | (\$0.13) | (\$0.07) |
|  | 2008 | \$2.07 | \$2.34 | \$2.73 | \$2.03 | \$2.07 | \$2.10 | \$1.63 |
|  | 2009 | \$0.25 | \$0.19 | \$0.47 | \$0.30 | \$0.31 | \$0.32 | \$0.10 |
|  | 2010 | (\$1.27) | (\$1.32) | (\$1.41) | (\$0.53) | (\$0.60) | (\$0.66) | (\$0.44) |
|  | 2011 | (\$0.12) | \$0.12 | (\$0.09) | (\$0.37) | (\$0.39) | (\$0.40) | (\$0.45) |
|  | 2012 | (\$3.46) | (\$3.21) | (\$4.83) | (\$0.99) | (\$1.10) | (\$1.21) | (\$0.42) |
|  | 2013 | \$0.88 | \$0.74 | \$0.98 | \$0.44 | \$0.48 | \$0.52 | \$0.61 |
|  | 2014 | \$0.70 | \$0.67 | \$0.97 | \$0.71 | \$0.74 | \$0.76 | \$0.71 |
|  | 2015 | \$0.14 | \$0.09 | \$0.03 | (\$0.14) | (\$0.14) | (\$0.13) | (\$0.11) |
|  | 2016 | \$0.42 | \$0.41 | \$0.52 | \$0.27 | \$0.30 | \$0.33 | \$0.27 |
|  | 2017 | \$0.32 | \$0.29 | \$0.32 | \$0.07 | \$0.10 | \$0.13 | \$0.13 |
|  | 2018 | \$0.53 | \$0.53 | \$0.66 | \$0.31 | \$0.36 | \$0.39 | \$0.34 |
| Average |  | \$0.102 | \$0.112 | \$0.124 | \$0.115 | \$0.122 | \$0.126 | \$0.123 |

Kansas City Soybean Selling Strategies Results


Minneapolis Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasona |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.28 | \$0.24 | \$0.34 | \$0.24 | \$0.27 | \$0.30 | \$0.24 |
|  | 1986 | \$0.18 | \$0.12 | \$0.18 | \$0.06 | \$0.09 | \$0.12 | \$0.07 |
|  | 1987 | (\$0.06) | (\$0.04) | \$0.08 | \$0.04 | \$0.03 | \$0.03 | (\$0.01) |
|  | 1988 | (\$0.53) | (\$0.31) | (\$0.34) | \$0.42 | \$0.31 | \$0.21 | (\$0.02) |
|  | 1989 | \$0.18 | \$0.13 | \$0.18 | \$0.00 | \$0.03 | \$0.05 | \$0.01 |
|  | 1990 | \$0.28 | \$0.32 | \$0.42 | \$0.25 | \$0.28 | \$0.31 | \$0.25 |
|  | 1991 | \$0.01 | (\$0.00) | (\$0.00) | (\$0.12) | (\$0.11) | (\$0.09) | (\$0.09) |
|  | 1992 | \$0.46 | \$0.41 | \$0.50 | \$0.29 | \$0.33 | \$0.36 | \$0.30 |
|  | 1993 | (\$0.44) | (\$0.44) | (\$0.45) | (\$0.27) | (\$0.38) | (\$0.48) | (\$0.27) |
|  | 1994 | \$0.27 | \$0.22 | \$0.25 | \$0.10 | \$0.13 | \$0.15 | \$0.13 |
|  | 1995 | (\$0.66) | (\$0.61) | (\$0.62) | (\$0.12) | (\$0.19) | (\$0.27) | (\$0.19) |
|  | 1996 | \$0.50 | \$0.59 | \$0.61 | \$0.31 | \$0.35 | \$0.38 | \$0.33 |
|  | 1997 | (\$0.19) | (\$0.20) | (\$0.18) | (\$0.18) | (\$0.20) | (\$0.22) | (\$0.12) |
|  | 1998 | \$0.33 | \$0.27 | \$0.38 | \$0.21 | \$0.24 | \$0.26 | \$0.21 |
|  | 1999 | \$0.26 | \$0.24 | \$0.27 | \$0.11 | \$0.14 | \$0.16 | \$0.12 |
|  | 2000 | \$0.24 | \$0.20 | \$0.35 | \$0.14 | \$0.17 | \$0.20 | \$0.15 |
|  | 2001 | \$0.27 | \$0.20 | \$0.14 | (\$0.06) | (\$0.02) | \$0.01 | \$0.01 |
|  | 2002 | (\$0.13) | (\$0.12) | (\$0.26) | (\$0.20) | (\$0.25) | (\$0.28) | (\$0.14) |
|  | 2003 | \$0.19 | \$0.17 | \$0.26 | \$0.10 | \$0.12 | \$0.14 | \$0.12 |
|  | 2004 | \$0.66 | \$0.67 | \$0.91 | \$0.63 | \$0.66 | \$0.69 | \$0.64 |
|  | 2005 | \$0.29 | \$0.30 | \$0.28 | \$0.11 | \$0.14 | \$0.16 | \$0.12 |
|  | 2006 | (\$0.57) | (\$0.54) | (\$0.52) | (\$0.30) | (\$0.36) | (\$0.41) | (\$0.24) |
|  | 2007 | \$0.21 | \$0.15 | \$0.19 | (\$0.24) | (\$0.21) | (\$0.18) | (\$0.13) |
|  | 2008 | \$1.87 | \$2.17 | \$2.59 | \$1.83 | \$1.87 | \$1.91 | \$1.52 |
|  | 2009 | \$0.04 | (\$0.03) | \$0.27 | \$0.13 | \$0.13 | \$0.13 | (\$0.16) |
|  | 2010 | (\$1.69) | (\$1.73) | (\$1.82) | (\$0.41) | (\$0.47) | (\$0.53) | (\$0.38) |
|  | 2011 | \$0.02 | \$0.25 | \$0.05 | (\$0.35) | (\$0.36) | (\$0.36) | (\$0.42) |
|  | 2012 | (\$1.16) | (\$1.02) | (\$1.98) | (\$0.59) | (\$0.65) | (\$0.72) | (\$0.26) |
|  | 2013 | \$1.05 | \$0.89 | \$1.17 | \$0.52 | \$0.58 | \$0.63 | \$0.70 |
|  | 2014 | \$1.01 | \$0.98 | \$1.45 | \$1.04 | \$1.09 | \$1.13 | \$1.04 |
|  | 2015 | \$0.17 | \$0.12 | \$0.07 | (\$0.15) | (\$0.14) | (\$0.12) | (\$0.13) |
|  | 2016 | \$0.19 | \$0.17 | \$0.30 | \$0.04 | \$0.07 | \$0.10 | \$0.04 |
|  | 2017 | \$0.37 | \$0.35 | \$0.38 | \$0.10 | \$0.14 | \$0.17 | \$0.13 |
|  | 2018 | \$0.21 | \$0.21 | \$0.31 | \$0.03 | \$0.07 | \$0.09 | \$0.05 |
| Average |  | \$0.121 | \$0.128 | \$0.170 | \$0.110 | \$0.115 | \$0.117 | \$0.107 |

Minneapolis Soybean Selling Strategies Results


## North Central lowa Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell <br> Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.25 | \$0.21 | \$0.31 | \$0.21 | \$0.24 | \$0.27 | \$0.21 |
|  | 1986 | \$0.18 | \$0.12 | \$0.17 | \$0.06 | \$0.09 | \$0.12 | \$0.07 |
|  | 1987 | (\$0.06) | (\$0.04) | \$0.09 | \$0.04 | \$0.03 | \$0.04 | (\$0.01) |
|  | 1988 | (\$0.50) | (\$0.29) | (\$0.32) | \$0.39 | \$0.29 | \$0.20 | (\$0.02) |
|  | 1989 | \$0.20 | \$0.15 | \$0.20 | \$0.00 | \$0.03 | \$0.06 | \$0.01 |
|  | 1990 | \$0.24 | \$0.28 | \$0.38 | \$0.22 | \$0.24 | \$0.27 | \$0.21 |
|  | 1991 | \$0.01 | (\$0.00) | (\$0.00) | (\$0.12) | (\$0.11) | (\$0.10) | (\$0.09) |
|  | 1992 | \$0.39 | \$0.35 | \$0.42 | \$0.25 | \$0.28 | \$0.31 | \$0.27 |
|  | 1993 | (\$0.21) | (\$0.21) | (\$0.22) | (\$0.24) | (\$0.31) | (\$0.34) | (\$0.23) |
|  | 1994 | \$0.26 | \$0.22 | \$0.25 | \$0.10 | \$0.13 | \$0.15 | \$0.13 |
|  | 1995 | (\$0.67) | (\$0.62) | (\$0.62) | (\$0.12) | (\$0.20) | (\$0.27) | (\$0.20) |
|  | 1996 | \$0.58 | \$0.67 | \$0.70 | \$0.41 | \$0.44 | \$0.47 | \$0.43 |
|  | 1997 | (\$0.20) | (\$0.20) | (\$0.19) | (\$0.18) | (\$0.21) | (\$0.23) | (\$0.12) |
|  | 1998 | \$0.27 | \$0.20 | \$0.33 | \$0.15 | \$0.18 | \$0.20 | \$0.15 |
|  | 1999 | \$0.27 | \$0.25 | \$0.28 | \$0.11 | \$0.14 | \$0.17 | \$0.12 |
|  | 2000 | \$0.29 | \$0.25 | \$0.41 | \$0.19 | \$0.22 | \$0.25 | \$0.20 |
|  | 2001 | \$0.24 | \$0.18 | \$0.13 | (\$0.06) | (\$0.02) | \$0.01 | \$0.00 |
|  | 2002 | (\$0.16) | (\$0.15) | (\$0.29) | (\$0.20) | (\$0.24) | (\$0.29) | (\$0.14) |
|  | 2003 | \$0.20 | \$0.18 | \$0.27 | \$0.11 | \$0.13 | \$0.15 | \$0.12 |
|  | 2004 | \$0.61 | \$0.62 | \$0.83 | \$0.58 | \$0.61 | \$0.64 | \$0.59 |
|  | 2005 | \$0.31 | \$0.32 | \$0.30 | \$0.11 | \$0.15 | \$0.17 | \$0.13 |
|  | 2006 | (\$0.58) | (\$0.56) | (\$0.53) | (\$0.31) | (\$0.36) | (\$0.42) | (\$0.24) |
|  | 2007 | \$0.19 | \$0.13 | \$0.17 | (\$0.21) | (\$0.19) | (\$0.17) | (\$0.11) |
|  | 2008 | \$1.89 | \$2.20 | \$2.63 | \$1.86 | \$1.90 | \$1.94 | \$1.54 |
|  | 2009 | \$0.05 | (\$0.03) | \$0.28 | \$0.14 | \$0.13 | \$0.13 | (\$0.17) |
|  | 2010 | (\$1.03) | (\$1.07) | (\$1.17) | \$0.38 | \$0.32 | \$0.25 | (\$0.43) |
|  | 2011 | \$0.02 | \$0.23 | \$0.05 | (\$0.32) | (\$0.33) | (\$0.34) | (\$0.39) |
|  | 2012 | (\$1.45) | (\$1.27) | (\$2.47) | (\$0.73) | (\$0.81) | (\$0.89) | (\$0.33) |
|  | 2013 | \$1.03 | \$0.87 | \$1.15 | \$0.51 | \$0.57 | \$0.62 | \$0.69 |
|  | 2014 | \$0.95 | \$0.92 | \$1.34 | \$0.98 | \$1.02 | \$1.05 | \$0.98 |
|  | 2015 | \$0.17 | \$0.12 | \$0.07 | (\$0.15) | (\$0.14) | (\$0.12) | (\$0.13) |
|  | 2016 | \$0.19 | \$0.17 | \$0.29 | \$0.04 | \$0.07 | \$0.09 | \$0.04 |
|  | 2017 | \$0.31 | \$0.28 | \$0.31 | \$0.04 | \$0.07 | \$0.10 | \$0.11 |
|  | 2018 | \$0.22 | \$0.22 | \$0.33 | \$0.03 | \$0.07 | \$0.10 | \$0.06 |
| Average |  | \$0.131 | \$0.139 | \$0.173 | \$0.125 | \$0.131 | \$0.135 | \$0.101 |

## North Central Iowa Soybean Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-of-money call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.73 | \$0.62 | \$0.81 | \$0.52 | \$0.62 | \$0.68 | \$0.54 |
|  | 1986 | \$0.30 | \$0.24 | \$0.28 | \$0.02 | \$0.11 | \$0.16 | \$0.07 |
|  | 1987 | (\$0.27) | (\$0.16) | \$0.11 | \$0.18 | \$0.11 | \$0.07 | (\$0.12) |
|  | 1988 | (\$0.69) | (\$0.15) | (\$0.03) | \$0.83 | \$0.65 | \$0.48 | \$0.06 |
|  | 1989 | \$1.14 | \$0.98 | \$1.21 | \$0.72 | \$0.81 | \$0.88 | \$0.78 |
|  | 1990 | \$0.02 | \$0.09 | \$0.19 | (\$0.03) | (\$0.02) | \$0.02 | (\$0.09) |
|  | 1991 | \$0.23 | \$0.17 | \$0.28 | (\$0.02) | \$0.05 | \$0.10 | \$0.01 |
|  | 1992 | \$0.61 | \$0.59 | \$0.78 | \$0.41 | \$0.48 | \$0.53 | \$0.44 |
|  | 1993 | \$0.13 | \$0.27 | \$0.04 | (\$0.14) | (\$0.22) | (\$0.23) | (\$0.31) |
|  | 1994 | \$0.65 | \$0.58 | \$0.65 | \$0.35 | \$0.41 | \$0.45 | \$0.38 |
|  | 1995 | (\$0.50) | (\$0.44) | (\$0.45) | (\$0.34) | (\$0.51) | (\$0.61) | (\$0.36) |
|  | 1996 | \$0.17 | \$0.29 | \$0.40 | (\$0.02) | \$0.02 | \$0.07 | (\$0.07) |
|  | 1997 | \$0.40 | \$0.35 | \$0.54 | \$0.14 | \$0.22 | \$0.28 | \$0.15 |
|  | 1998 | \$0.89 | \$0.74 | \$1.02 | \$0.67 | \$0.75 | \$0.80 | \$0.68 |
|  | 1999 | \$0.01 | (\$0.12) | (\$0.08) | (\$0.25) | (\$0.26) | (\$0.24) | (\$0.18) |
|  | 2000 | \$0.20 | \$0.18 | \$0.45 | \$0.00 | \$0.08 | \$0.14 | \$0.12 |
|  | 2001 | \$0.29 | \$0.24 | (\$0.05) | (\$0.30) | (\$0.28) | (\$0.25) | (\$0.23) |
|  | 2002 | (\$0.44) | (\$0.33) | (\$0.64) | (\$0.19) | (\$0.31) | (\$0.43) | (\$0.28) |
|  | 2003 | (\$2.10) | (\$2.01) | (\$1.89) | (\$0.23) | (\$0.45) | (\$0.68) | (\$0.48) |
|  | 2004 | \$1.39 | \$1.44 | \$1.94 | \$1.36 | \$1.44 | \$1.48 | \$1.30 |
|  | 2005 | \$0.54 | \$0.77 | \$0.86 | \$0.44 | \$0.49 | \$0.54 | \$0.43 |
|  | 2006 | \$0.48 | \$0.46 | \$0.49 | \$0.09 | \$0.15 | \$0.21 | \$0.13 |
|  | 2007 | (\$1.24) | (\$1.10) | (\$1.27) | (\$0.45) | (\$0.57) | (\$0.69) | (\$0.47) |
|  | 2008 | \$2.98 | \$3.23 | \$3.51 | \$1.77 | \$1.86 | \$1.94 | \$1.87 |
|  | 2009 | (\$0.59) | (\$0.52) | (\$0.32) | (\$0.50) | (\$0.55) | (\$0.61) | (\$0.88) |
|  | 2010 | (\$1.47) | (\$1.46) | (\$1.57) | (\$0.97) | (\$1.09) | (\$1.21) | (\$0.56) |
|  | 2011 | \$1.82 | \$1.89 | \$1.63 | \$0.61 | \$0.69 | \$0.76 | \$0.75 |
|  | 2012 | (\$2.22) | (\$1.62) | (\$2.34) | (\$0.39) | (\$0.52) | (\$0.66) | (\$0.89) |
|  | 2013 | (\$0.21) | (\$0.31) | (\$0.39) | (\$0.67) | (\$0.75) | (\$0.81) | (\$0.47) |
|  | 2014 | \$1.92 | \$2.02 | \$2.56 | \$1.91 | \$1.99 | \$2.07 | \$1.90 |
|  | 2015 | \$0.57 | \$0.49 | \$0.54 | \$0.08 | \$0.14 | \$0.20 | \$0.03 |
|  | 2016 | \$0.18 | \$0.45 | \$0.79 | \$0.56 | \$0.57 | \$0.57 | \$0.46 |
|  | 2017 | (\$0.08) | (\$0.21) | (\$0.36) | (\$0.65) | (\$0.67) | (\$0.67) | (\$0.36) |
|  | 2018 | \$1.18 | \$1.06 | \$1.42 | \$0.83 | \$0.90 | \$0.97 | \$0.83 |
| Average |  | \$0.21 | \$0.26 | \$0.33 | \$0.19 | \$0.19 | \$0.19 | \$0.15 |

## Omaha Corn Selling Strategies Results

|  |  | Sell average 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, <br> buy 2 <br> strikes <br> out-of- <br> money <br> call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.24 | \$0.20 | \$0.30 | \$0.20 | \$0.23 | \$0.26 | \$0.21 |
|  | 1986 | \$0.19 | \$0.13 | \$0.18 | \$0.06 | \$0.10 | \$0.12 | \$0.07 |
|  | 1987 | (\$0.06) | (\$0.04) | \$0.09 | \$0.04 | \$0.03 | \$0.04 | (\$0.01) |
|  | 1988 | (\$0.46) | (\$0.32) | (\$0.34) | \$0.27 | \$0.20 | \$0.13 | (\$0.06) |
|  | 1989 | \$0.21 | \$0.15 | \$0.21 | \$0.00 | \$0.03 | \$0.06 | \$0.02 |
|  | 1990 | \$0.26 | \$0.30 | \$0.41 | \$0.23 | \$0.26 | \$0.29 | \$0.22 |
|  | 1991 | (\$0.00) | (\$0.02) | (\$0.02) | (\$0.13) | (\$0.12) | (\$0.11) | (\$0.10) |
|  | 1992 | \$0.46 | \$0.42 | \$0.50 | \$0.30 | \$0.34 | \$0.37 | \$0.32 |
|  | 1993 | (\$0.17) | (\$0.17) | (\$0.18) | (\$0.19) | (\$0.25) | (\$0.28) | (\$0.19) |
|  | 1994 | \$0.34 | \$0.28 | \$0.32 | \$0.14 | \$0.17 | \$0.20 | \$0.18 |
|  | 1995 | (\$0.75) | (\$0.69) | (\$0.70) | (\$0.15) | (\$0.23) | (\$0.32) | (\$0.23) |
|  | 1996 | \$0.47 | \$0.56 | \$0.58 | \$0.30 | \$0.33 | \$0.36 | \$0.32 |
|  | 1997 | (\$0.22) | (\$0.22) | (\$0.20) | (\$0.20) | (\$0.23) | (\$0.25) | (\$0.13) |
|  | 1998 | \$0.38 | \$0.31 | \$0.43 | \$0.25 | \$0.27 | \$0.30 | \$0.24 |
|  | 1999 | \$0.30 | \$0.27 | \$0.31 | \$0.12 | \$0.16 | \$0.18 | \$0.14 |
|  | 2000 | \$0.42 | \$0.37 | \$0.55 | \$0.30 | \$0.34 | \$0.37 | \$0.31 |
|  | 2001 | \$0.23 | \$0.17 | \$0.12 | (\$0.05) | (\$0.02) | \$0.01 | \$0.01 |
|  | 2002 | (\$0.20) | (\$0.19) | (\$0.36) | (\$0.24) | (\$0.30) | (\$0.35) | (\$0.17) |
|  | 2003 | \$0.18 | \$0.16 | \$0.25 | \$0.09 | \$0.11 | \$0.13 | \$0.12 |
|  | 2004 | \$0.59 | \$0.61 | \$0.81 | \$0.57 | \$0.60 | \$0.62 | \$0.58 |
|  | 2005 | \$0.27 | \$0.29 | \$0.26 | \$0.08 | \$0.11 | \$0.14 | \$0.09 |
|  | 2006 | (\$0.67) | (\$0.64) | (\$0.61) | (\$0.30) | (\$0.36) | (\$0.42) | (\$0.24) |
|  | 2007 | \$0.17 | \$0.12 | \$0.16 | (\$0.20) | (\$0.18) | (\$0.15) | (\$0.11) |
|  | 2008 | \$2.02 | \$2.30 | \$2.69 | \$1.98 | \$2.02 | \$2.05 | \$1.60 |
|  | 2009 | \$0.04 | (\$0.02) | \$0.25 | \$0.12 | \$0.12 | \$0.12 | (\$0.15) |
|  | 2010 | (\$1.74) | (\$1.78) | (\$1.86) | (\$0.43) | (\$0.49) | (\$0.55) | (\$0.39) |
|  | 2011 | (\$0.10) | \$0.11 | (\$0.07) | (\$0.40) | (\$0.41) | (\$0.43) | (\$0.48) |
|  | 2012 | (\$1.30) | (\$1.14) | (\$2.21) | (\$0.66) | (\$0.73) | (\$0.80) | (\$0.29) |
|  | 2013 | \$0.94 | \$0.80 | \$1.05 | \$0.47 | \$0.52 | \$0.56 | \$0.63 |
|  | 2014 | \$0.96 | \$0.93 | \$1.34 | \$0.99 | \$1.02 | \$1.06 | \$0.99 |
|  | 2015 | \$0.16 | \$0.11 | \$0.05 | (\$0.17) | (\$0.16) | (\$0.15) | (\$0.16) |
|  | 2016 | \$0.21 | \$0.19 | \$0.33 | \$0.04 | \$0.07 | \$0.10 | \$0.04 |
|  | 2017 | \$0.33 | \$0.30 | \$0.34 | \$0.04 | \$0.08 | \$0.11 | \$0.12 |
|  | 2018 | \$0.21 | \$0.21 | \$0.31 | \$0.03 | \$0.07 | \$0.09 | \$0.06 |
| Average |  | \$0.115 | \$0.119 | \$0.155 | \$0.103 | \$0.109 | \$0.114 | \$0.104 |

## Omaha Soybean Selling Strategies Results

|  |  | Sell average $1 / 1$. 9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.65 | \$0.56 | \$0.73 | \$0.47 | \$0.55 | \$0.61 | \$0.49 |
|  | 1986 | \$0.28 | \$0.22 | \$0.26 | \$0.02 | \$0.10 | \$0.15 | \$0.07 |
|  | 1987 | (\$0.28) | (\$0.17) | \$0.14 | \$0.19 | \$0.11 | \$0.07 | (\$0.14) |
|  | 1988 | (\$0.68) | (\$0.19) | (\$0.08) | \$0.72 | \$0.55 | \$0.39 | \$0.03 |
|  | 1989 | \$1.19 | \$1.01 | \$1.27 | \$0.73 | \$0.83 | \$0.91 | \$0.80 |
|  | 1990 | \$0.02 | \$0.08 | \$0.19 | (\$0.03) | (\$0.02) | \$0.02 | (\$0.09) |
|  | 1991 | \$0.05 | (\$0.01) | \$0.10 | (\$0.17) | (\$0.12) | (\$0.07) | (\$0.12) |
|  | 1992 | \$0.54 | \$0.53 | \$0.70 | \$0.37 | \$0.43 | \$0.48 | \$0.39 |
|  | 1993 | \$0.10 | \$0.20 | \$0.03 | (\$0.10) | (\$0.17) | (\$0.17) | (\$0.23) |
|  | 1994 | \$0.63 | \$0.56 | \$0.63 | \$0.34 | \$0.40 | \$0.43 | \$0.37 |
|  | 1995 | (\$0.60) | (\$0.53) | (\$0.54) | (\$0.41) | (\$0.62) | (\$0.73) | (\$0.43) |
|  | 1996 | \$0.15 | \$0.26 | \$0.35 | (\$0.02) | \$0.02 | \$0.06 | (\$0.06) |
|  | 1997 | (\$0.03) | (\$0.08) | \$0.11 | (\$0.23) | (\$0.19) | (\$0.15) | (\$0.17) |
|  | 1998 | \$0.66 | \$0.51 | \$0.79 | \$0.44 | \$0.51 | \$0.57 | \$0.45 |
|  | 1999 | \$0.01 | (\$0.12) | (\$0.08) | (\$0.25) | (\$0.25) | (\$0.23) | (\$0.18) |
|  | 2000 | \$0.21 | \$0.19 | \$0.49 | \$0.01 | \$0.08 | \$0.15 | \$0.12 |
|  | 2001 | \$0.10 | \$0.06 | (\$0.20) | (\$0.32) | (\$0.35) | (\$0.35) | (\$0.24) |
|  | 2002 | (\$0.52) | (\$0.39) | (\$0.75) | (\$0.22) | (\$0.36) | (\$0.51) | (\$0.33) |
|  | 2003 | (\$1.56) | (\$1.49) | (\$1.40) | (\$0.17) | (\$0.33) | (\$0.50) | (\$0.36) |
|  | 2004 | \$1.44 | \$1.49 | \$2.00 | \$1.41 | \$1.49 | \$1.53 | \$1.34 |
|  | 2005 | \$0.55 | \$0.78 | \$0.88 | \$0.44 | \$0.50 | \$0.55 | \$0.44 |
|  | 2006 | \$0.48 | \$0.45 | \$0.48 | \$0.09 | \$0.15 | \$0.20 | \$0.12 |
|  | 2007 | (\$1.41) | (\$1.27) | (\$1.44) | (\$0.45) | (\$0.57) | (\$0.70) | (\$0.47) |
|  | 2008 | \$3.89 | \$4.13 | \$4.41 | \$2.68 | \$2.77 | \$2.85 | \$2.78 |
|  | 2009 | \$0.33 | \$0.39 | \$0.58 | (\$0.08) | (\$0.08) | (\$0.08) | (\$0.28) |
|  | 2010 | (\$1.44) | (\$1.44) | (\$1.55) | (\$0.96) | (\$1.07) | (\$1.19) | (\$0.55) |
|  | 2011 | \$1.77 | \$1.84 | \$1.59 | \$0.59 | \$0.67 | \$0.74 | \$0.73 |
|  | 2012 | (\$2.46) | (\$1.80) | (\$2.60) | (\$0.43) | (\$0.58) | (\$0.73) | (\$0.99) |
|  | 2013 | (\$0.05) | (\$0.14) | (\$0.20) | (\$0.40) | (\$0.45) | (\$0.50) | (\$0.44) |
|  | 2014 | \$2.11 | \$2.21 | \$2.76 | \$2.10 | \$2.19 | \$2.26 | \$2.09 |
|  | 2015 | \$0.59 | \$0.52 | \$0.56 | \$0.09 | \$0.15 | \$0.21 | \$0.03 |
|  | 2016 | \$0.19 | \$0.47 | \$0.83 | \$0.59 | \$0.60 | \$0.60 | \$0.48 |
|  | 2017 | (\$0.08) | (\$0.22) | (\$0.38) | (\$0.68) | (\$0.70) | (\$0.71) | (\$0.38) |
|  | 2018 | \$0.79 | \$0.67 | \$1.02 | \$0.45 | \$0.52 | \$0.59 | \$0.47 |
| Average |  | \$0.22 | \$0.27 | \$0.34 | \$0.20 | \$0.20 | \$0.20 | \$0.17 |

Toledo Corn Selling Strategies Results

|  |  | $\begin{gathered} \text { Sell } \\ \text { average } \end{gathered}$ 1/1-9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.27 | \$0.23 | \$0.33 | \$0.23 | \$0.26 | \$0.28 | \$0.23 |
|  | 1986 | \$0.23 | \$0.17 | \$0.22 | \$0.10 | \$0.14 | \$0.16 | \$0.12 |
|  | 1987 | (\$0.06) | (\$0.04) | \$0.10 | \$0.04 | \$0.04 | \$0.04 | (\$0.01) |
|  | 1988 | (\$0.32) | (\$0.11) | (\$0.14) | \$0.38 | \$0.28 | \$0.18 | \$0.03 |
|  | 1989 | \$0.15 | \$0.09 | \$0.15 | (\$0.05) | (\$0.02) | \$0.01 | (\$0.04) |
|  | 1990 | \$0.28 | \$0.32 | \$0.42 | \$0.25 | \$0.28 | \$0.31 | \$0.25 |
|  | 1991 | (\$0.01) | (\$0.02) | (\$0.02) | (\$0.15) | (\$0.15) | (\$0.13) | (\$0.12) |
|  | 1992 | \$0.29 | \$0.26 | \$0.33 | \$0.16 | \$0.19 | \$0.22 | \$0.17 |
|  | 1993 | (\$0.15) | (\$0.15) | (\$0.15) | (\$0.16) | (\$0.21) | (\$0.23) | (\$0.16) |
|  | 1994 | \$0.28 | \$0.23 | \$0.27 | \$0.11 | \$0.13 | \$0.16 | \$0.13 |
|  | 1995 | (\$0.66) | (\$0.60) | (\$0.61) | (\$0.12) | (\$0.19) | (\$0.27) | (\$0.19) |
|  | 1996 | \$0.72 | \$0.83 | \$0.86 | \$0.51 | \$0.55 | \$0.58 | \$0.53 |
|  | 1997 | (\$0.16) | (\$0.16) | (\$0.15) | (\$0.19) | (\$0.21) | (\$0.22) | (\$0.12) |
|  | 1998 | \$0.33 | \$0.26 | \$0.38 | \$0.20 | \$0.23 | \$0.25 | \$0.20 |
|  | 1999 | \$0.31 | \$0.28 | \$0.32 | \$0.13 | \$0.16 | \$0.19 | \$0.14 |
|  | 2000 | \$0.28 | \$0.24 | \$0.39 | \$0.19 | \$0.22 | \$0.24 | \$0.19 |
|  | 2001 | \$0.28 | \$0.22 | \$0.16 | (\$0.03) | \$0.01 | \$0.04 | \$0.03 |
|  | 2002 | (\$0.22) | (\$0.21) | (\$0.45) | (\$0.35) | (\$0.43) | (\$0.50) | (\$0.25) |
|  | 2003 | (\$0.10) | (\$0.12) | (\$0.04) | (\$0.11) | (\$0.11) | (\$0.11) | (\$0.12) |
|  | 2004 | \$0.60 | \$0.61 | \$0.82 | \$0.57 | \$0.60 | \$0.63 | \$0.58 |
|  | 2005 | \$0.36 | \$0.37 | \$0.35 | \$0.15 | \$0.19 | \$0.22 | \$0.16 |
|  | 2006 | (\$0.78) | (\$0.75) | (\$0.73) | (\$0.28) | (\$0.34) | (\$0.40) | (\$0.22) |
|  | 2007 | \$0.20 | \$0.15 | \$0.18 | (\$0.21) | (\$0.18) | (\$0.15) | (\$0.11) |
|  | 2008 | \$2.54 | \$2.88 | \$3.36 | \$2.50 | \$2.54 | \$2.59 | \$2.00 |
|  | 2009 | \$0.04 | (\$0.02) | \$0.25 | \$0.12 | \$0.12 | \$0.12 | (\$0.15) |
|  | 2010 | (\$0.90) | (\$0.94) | (\$1.02) | \$0.33 | \$0.28 | \$0.22 | (\$0.37) |
|  | 2011 | (\$0.06) | \$0.15 | (\$0.03) | (\$0.48) | (\$0.49) | (\$0.50) | (\$0.58) |
|  | 2012 | (\$2.01) | (\$1.83) | (\$3.00) | (\$0.72) | (\$0.79) | (\$0.88) | (\$0.31) |
|  | 2013 | \$0.82 | \$0.70 | \$0.92 | \$0.41 | \$0.45 | \$0.49 | \$0.55 |
|  | 2014 | \$0.63 | \$0.60 | \$0.99 | \$0.65 | \$0.69 | \$0.72 | \$0.65 |
|  | 2015 | \$0.20 | \$0.15 | \$0.08 | (\$0.18) | (\$0.16) | (\$0.14) | (\$0.15) |
|  | 2016 | \$0.22 | \$0.20 | \$0.34 | \$0.04 | \$0.08 | \$0.11 | \$0.04 |
|  | 2017 | \$0.31 | \$0.28 | \$0.31 | \$0.04 | \$0.07 | \$0.10 | \$0.11 |
|  | 2018 | \$0.14 | \$0.14 | \$0.23 | (\$0.02) | \$0.01 | \$0.04 | \$0.01 |
| Average |  | \$0.119 | \$0.129 | \$0.159 | \$0.120 | \$0.124 | \$0.128 | \$0.095 |

Toledo Soybean Selling Strategies Results

|  |  | Sell average $1 / 1$. 9/1 | Sell average 3/1-9/1 | Sell Futures on seasonal | Sell futures, buy at-themoney call | Sell futures, buy 1 strike out-of-money call | Sell futures, buy 2 strikes out-ofmoney call | Buy at the money put on seasonal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | \$0.60 | \$0.52 | \$0.67 | \$0.43 | \$0.51 | \$0.56 | \$0.45 |
|  | 1986 | \$0.28 | \$0.22 | \$0.26 | \$0.02 | \$0.10 | \$0.15 | \$0.07 |
|  | 1987 | (\$0.30) | (\$0.18) | \$0.13 | \$0.20 | \$0.12 | \$0.07 | (\$0.13) |
|  | 1988 | (\$0.78) | (\$0.21) | (\$0.08) | \$0.84 | \$0.64 | \$0.45 | \$0.03 |
|  | 1989 | \$1.35 | \$1.17 | \$1.44 | \$0.87 | \$0.98 | \$1.06 | \$0.94 |
|  | 1990 | \$0.09 | \$0.15 | \$0.25 | (\$0.01) | \$0.03 | \$0.08 | (\$0.05) |
|  | 1991 | \$0.16 | \$0.10 | \$0.21 | (\$0.09) | (\$0.02) | \$0.03 | (\$0.05) |
|  | 1992 | \$0.61 | \$0.60 | \$0.79 | \$0.41 | \$0.49 | \$0.54 | \$0.44 |
|  | 1993 | \$0.10 | \$0.20 | \$0.03 | (\$0.10) | (\$0.17) | (\$0.17) | (\$0.23) |
|  | 1994 | \$0.83 | \$0.75 | \$0.83 | \$0.50 | \$0.57 | \$0.61 | \$0.54 |
|  | 1995 | (\$0.38) | (\$0.32) | (\$0.33) | (\$0.36) | (\$0.49) | (\$0.52) | (\$0.36) |
|  | 1996 | \$0.69 | \$0.82 | \$0.96 | \$0.40 | \$0.49 | \$0.55 | \$0.37 |
|  | 1997 | (\$0.03) | (\$0.08) | \$0.11 | (\$0.22) | (\$0.18) | (\$0.14) | (\$0.16) |
|  | 1998 | \$0.91 | \$0.75 | \$1.04 | \$0.69 | \$0.76 | \$0.82 | \$0.69 |
|  | 1999 | (\$0.01) | (\$0.16) | (\$0.11) | (\$0.27) | (\$0.29) | (\$0.28) | (\$0.19) |
|  | 2000 | \$0.41 | \$0.40 | \$0.65 | \$0.20 | \$0.29 | \$0.35 | \$0.26 |
|  | 2001 | \$0.10 | \$0.06 | (\$0.22) | (\$0.34) | (\$0.38) | (\$0.38) | (\$0.26) |
|  | 2002 | (\$0.61) | (\$0.45) | (\$0.87) | (\$0.26) | (\$0.42) | (\$0.59) | (\$0.38) |
|  | 2003 | (\$1.84) | (\$1.78) | (\$1.69) | (\$0.16) | (\$0.31) | (\$0.48) | (\$0.34) |
|  | 2004 | \$1.27 | \$1.31 | \$1.76 | \$1.24 | \$1.31 | \$1.35 | \$1.19 |
|  | 2005 | \$0.56 | \$0.80 | \$0.90 | \$0.45 | \$0.51 | \$0.56 | \$0.43 |
|  | 2006 | \$0.02 | (\$0.01) | \$0.03 | (\$0.27) | (\$0.26) | (\$0.24) | (\$0.20) |
|  | 2007 | (\$1.25) | (\$1.11) | (\$1.28) | (\$0.45) | (\$0.57) | (\$0.69) | (\$0.47) |
|  | 2008 | \$4.62 | \$4.92 | \$5.24 | \$3.19 | \$3.29 | \$3.39 | \$3.31 |
|  | 2009 | (\$0.41) | (\$0.35) | (\$0.16) | (\$0.40) | (\$0.44) | (\$0.49) | (\$0.72) |
|  | 2010 | (\$1.38) | (\$1.38) | (\$1.48) | (\$0.92) | (\$1.02) | (\$1.14) | (\$0.53) |
|  | 2011 | \$1.17 | \$1.23 | \$0.99 | (\$0.01) | \$0.07 | \$0.14 | \$0.12 |
|  | 2012 | (\$1.77) | (\$1.23) | (\$1.88) | (\$0.36) | (\$0.48) | (\$0.61) | (\$0.83) |
|  | 2013 | (\$0.05) | (\$0.13) | (\$0.19) | (\$0.39) | (\$0.44) | (\$0.48) | (\$0.43) |
|  | 2014 | \$1.72 | \$1.82 | \$2.33 | \$1.71 | \$1.79 | \$1.86 | \$1.71 |
|  | 2015 | \$0.62 | \$0.54 | \$0.59 | \$0.09 | \$0.15 | \$0.22 | \$0.02 |
|  | 2016 | \$0.30 | \$0.59 | \$0.96 | \$0.67 | \$0.67 | \$0.68 | \$0.56 |
|  | 2017 | \$0.11 | (\$0.04) | (\$0.20) | (\$0.58) | (\$0.57) | (\$0.54) | (\$0.36) |
|  | 2018 | \$1.29 | \$1.16 | \$1.56 | \$0.90 | \$0.97 | \$1.06 | \$0.91 |
| Average |  | \$0.27 | \$0.31 | \$0.39 | \$0.22 | \$0.23 | \$0.23 | \$0.19 |

