Basis & hedging

Scenario: (On 4/9)

you want 10,000 bu of corn in July in Elizabeth City NC.

current price

Buy 2 July corn contracts. @ $\boxed{\$3.50}$

Fact: (convergence) In Chicago, at delivery in July spot price = price of July futures.

Suppose (assume): In July, spot corn price in E.C. = spot price in Chicago + \$0.20/bu.

Claim: On 4/9/20 in E.C., you can assure yourself a corn price of $\boxed{\$3.50} + \boxed{0.20} = 3.70$

Proof Suppose, in July, spot Chicago price = \$3.80

Cash position: $-\underbrace{(3.80 + .20)}_{\text{futures + basis}} = -4.00$

futures position: $+(3.80 - 3.50) = +.30$

-3.70

Price you sold futures at in July

Price you bought futures at in April.