A. Yield Insurance
Suppose a farm has 250 acres of corn in one insured basic unit with an actual production history (APH) average yield of 170 bu/ac.

1. If the farmer buys 65% Yield Protection (YP) crop insurance, what would be the per acre yield guarantee? What would be the yield guarantee for the 250 acre unit?

2. If the farmer actually harvested 26,250 bushels from the unit (an average of 105 bu/ac), what would be the YP indemnity, assuming a 100% price election of $3.86/bu?

3. How would the indemnity for question 2 change if the farmer actually sold the corn for $4.00/bu?

4. If instead the farmer actually harvested 28,000 bushels from the unit (an average of 112 bu/ac), what would be the YP indemnity, assuming a 100% price election of $3.86/bu?

Suppose the farmer instead bought a corn Area Yield Protection (AYP) policy in a county with an average yield of 155 bu/ac. The farmer buys a AYP policy with a 90% coverage level, so the county yield guarantee is 90% \times 155 \text{ bu/ac} = 139.5 \text{ bu/ac}. The farmer enrolls all 250 corn acres.

5. If the county average yield is 135 bu/ac and the farmer chose a $3.86/bu price election, what would be the AYP indemnity?

6. How would the AYP indemnity change if the farmer’s actual yield was 110 bu/ac? How would the AYP indemnity change if the farmer actually sold the corn for $4.00/bu?
B. Revenue Insurance

Suppose a farm has 250 acres of corn in one insured basic unit with an actual production history (APH) average yield of 170 bu/ac and the Revenue Protection (RP) base price is $3.86/bu.

1. If the farm buys 80% Revenue Protection crop insurance, what would be the initial per acre revenue guarantee? What would be the initial revenue guarantee for the 250 acre unit?

2. If the officially announced harvest price is $4.12/bu, what is the final per acre revenue guarantee and unit guarantee? What if the officially announced harvest price is $3.71/bu?

Suppose the farm actually harvests 28,000 bushels from the unit (an average of 112 bu/ac).

3. If the officially announced harvest price is $3.71/bu, what would be the RP indemnity?

4. Suppose the farm has a futures contract and actually sells the corn for $4.15/bu in March, how does the RP indemnity change?

Suppose the farm instead bought a corn Area Revenue Protection (ARP) policy in a county with an approved average yield of 155 bu/ac and the farmer chose a 90% coverage level. If the base price is $3.86/bu, then the initial county revenue guarantee is 90% \times 155 \text{ bu/ac} \times $3.86/\text{bu} = $538.47/\text{ac}. The farmer enrolls all 250 corn acres.

5. If the county average yield is 140 bu/ac and the officially announced ARP harvest price is $3.71/bu, what would be the ARP indemnity?

6. How would the ARP indemnity change if the farm’s actual yield was 180 bu/ac and it sold its grain for $4.10/bu? How would the ARP indemnity change if the farm’s actual yield was 115 bu/ac and it sold its grain for $3.50/bu?