Recent P Research Results

- The results of 34 corn trials conducted throughout Nebraska in 2002-4 under irrigation.
  - For corn following corn, the mean yield increase was 11.1 bu/Ac with 40 lb/Ac P2O5 applied when Bray-1 P ≤ 20 ppm (n = 9). 27% of the applied P was recovered. There was no response when Bray-1 P > 20 ppm (n = 5).
  - For corn following soybean, the mean yield increase was 14.8 bu/Ac with 40 lb/Ac P2O5 applied when Bray-1 P < 10 ppm (n = 4). 23% of the applied P was recovered. There was no response when Bray-1 P > 10 ppm (n = 11).

- Soil test P and P uptake (UP) when Bray-1 P < 20.
  - UP = 22.2 + 0.72*Bray-1, R² = 0.11; and
  - UP = 20.39 + 1.43*Olsen, R² = 0.25.

- For corn following soybean (n = 64):
  - UP = -7.52 + 1.84*Bray-1 + 7.40*SOM + 10.81 + 0.47; R² = 0.38;
  - UP = -3.44 + 2.02*Bray-1 + 5.49*SOM, R² = 0.27.

Economics of P use: discuss the numbers.