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1. Top priority of any new resources is for increased (more sites) and improved (more certainty) monitoring
   - Duration and extent of hypoxic zone
   - MARB nutrient concentration and load determinations
   - Research/demonstrations on sub-basins with "implemented practices"
   - **Spend at least the first $20 million this way!**

2. Do not "oversell" adaptive management
   - I would submit it is already being done (logic and common sense)
   - Care must be taken in choosing both initial and subsequent "actions"
   - There must be concern for "customer confidence" (e.g., going from 30 to 45%, and maybe beyond, reduction)
   - Intense (immense) monitoring will be required to assess outcomes.

3. Gulf and local water quality problems are:
   - Not due mainly to mismanagement of manures and fertilizers
   - But are due to landscape changes from prairies and wetlands to row-crops
   - And economic nutrient inputs and use of subsurface drainage where needed

4. Care must be taken in planning/predicting practice efficiencies (e.g., N rate, timing)
   - Data are limited and highly variable
   - Knowledge of management "starting point" is highly critical
   - Effects on yields/profit critical
   - Baker and Lemke, 2005 (p. 169) did not identify "insurance" N as one of the most important tools to reduce N loss from corn
   - In addition, logic may say, but data do not support that reduction in N has a disproportionate reduction in N loss.
   - Soil and air quality concerns also need to be considered

5. Evidence from a complete and accurate mass balance is irrefutable
   - If more N is removed from any area than is added, it has to come from "N storage," and the only "N storage" source is soil organic matter.
   - Although NANI is not a complete mass balance (it does not include leaching, runoff, denitrification, and/or volatilization losses), data from Illinois show it was 14 kg N/ha in 2005 and 2006 (17 kg/ha in 2000).
   - If those losses were included, the net, or mass balance, would most certainly be negative for those years.
   - The accuracy of a soil organic matter/N mass balance can be questioned (direct measurements of changes are very difficult) because of the uncertainty in each parameter; however, this is an important issue deserving of more attention.

6. Additional comments will be submitted following the "rewrite" of selected sections.

An additional data set related to N fertilization and SOM is that of Stanley. A. Barber on a silt loam soil in Indiana (Barber, S. A. 1979. Corn residue management and soil organic matter. Agronomy Journal 71:625-627). On continuous corn plots managed 12 years at 0, 60, and 178 lb/acre of N fertilizer, the soil organic matter contents at the end of 12 years were 2.70, 2.85, and 2.90%, respectively - the least significant difference at a 5% level of confidence was 0.16 %. In companion plots where they were looking at removing crop residue for energy (interesting: same issue as today!), when they fertilized at 250 lb/acre and left the residue, the SOM was 3.05%. In his study, corn grain yields went up with each increment of fertilizer N.