**Conservation Tillage panelist comments**

All,

Yesterday my notes indicate we settled on a non-manured or inorganic dominated system credit for TN of 2.5% coastal plain and 5.25% for the other HGMRs. This was after we applied a ground water coefficient by region to be consistent with the cover crop panels methods. My concern or question is should those HGMR coefficients be applied to total N or just the nitrate fraction as simulated by the WSM? If the concern is leaching loss then in my mind those coefficients should only be applied to the nitrate fraction as simulated not TN. Suggest that the HGMR ground water coefficients for both panels apply those coefficient numbers against the nitrate fraction the model simulates from the impacted land uses and not TN as was calculated yesterday since it is unlikely that the NH3X or ORGN fractions would be subject to leaching losses to base flows in reality.

Looking at low till with manure (meaning eligible for manure but not necessarily applications) across the entire watershed post 2013 progress there are 2118 land river segments with this land use with 60,203,100 lbs of edge of field TN. Of which 31,936,007 lbs is NO23 or nitrate or 53.05% of the total. So for the upland example yesterday we started with a 15% reduction and applied a 0.35 HGMR coefficient to derive the 5.25% benefit. What I propose is 15% times 0.5305 = 7.96% (nitrate fraction) with the 0.35 HGMR coefficient applied = 2.785% plus the remaining NH3X and ORGN fraction of 7.04% for an estimated benefit TN of 9.83%. So instead of a 5.25% reduction applied to TN we apply a 9% to TN or deal with the HGMR coefficient by land river segment nitrate fraction of the total N available at edge of field. This would be consistent with the cap applied to stream restoration denitrification protocol 2 which has a 40% reduction cap on just the nitrate fraction of the available TN by lrseg which Gary and Jeff indicated could be implemented in the modeling. Sorry I did not think of this yesterday but it occurred to me on the drive back that we gave a nitrate leaching discount to TN instead of just the fraction potentially lost to leaching.

Thoughts?
Bill

**Follow up action:** Conservation Tillage panel members will be polled to determine the best method of accounting for surface and subsurface flow. Results will be shared during the November 6th presentation