From:	Rod Sommerfield
To:	Felix-Gerth, Annie (MDA)
Subject:	comment: Nitrogen Fertilizer Management Plan
Date:	Thursday, September 26, 2013 4:10:15 AM

Annie

After attending the meeting at Cascade Meadows in Rochester and reading the draft on line I would like to comment on a BMP I don't see mentioned. That is Soil Organic Matter Generation. We farm about 20 miles North of Cascade Meadows and for the last 13 years have done so using no-till/strip-till. In that time we have raised our tested soil organic matter in a 6" core sample on average 2%. So long as the ground isn't frozen precipitation that falls on our soil soaks in where it falls. Our purchased Nitrogen has been reduced to .6 lbs. N per anticipated bushel corn yield. We feel the reason this works is that all residue is kept on the surface and not incorporated. This residue is then either consumed by earthworms and the castings distributed down into the soil extending the root zone, or converted into humus by the microbes on or near the surface sequestering the Nitrogen for latter use. Another benefit of S.O.M. Generation is that CEC is raised from the additional humus. Most Nitrogen fertilizer sources are converted to ammonium with a +charge and will stay in the root zone so long as there are enough – charge sites available. We feel most leaching of N from soils comes not from proper rates of fertilizer, but from the mineralization of residue that is buried in the soil and is broken down into base components such as nitrate. each 1% increase in S.O.M. sequesters 1000 lbs. of N of which 2% or 20 lbs. will be available to the crop each year. Page 34 of the draft shows cropland mineralization as the major contributor of available N to the soil. That is why we feel sequestering this N not mineralizing it is the best way to reduce leaching of N into the ground water.

If you would like more information on how we farm you could talk with Ryan Lemickson, He has been to our place several times and told me before the meeting he was hoping to stop out soon to look at some cover crops and a Nitrogen rate plot we are doing. If you have any questions this e-mail address is the best way to get hold of us. My cell is 507 696 3246 but I am usually farming during the day.

Good luck with the plan

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