Nutrient Management 590 Update

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National 590 Standard Update

- National Nutrient Management Conservation Practice Standard (code 590)
  - Routinely revised every 4-5 years
  - General so it applies to all States
  - Delivers minimum required NM planning criteria
  - States adjust the National to make it work locally

590 Completion Timeline
Ample Opportunity for Comment

- SERA-17 recommendations by Sept. 30, 2010
- Draft national standard by October, 2010
- Draft review by NRCS and partners (30 days)
- NHQ review/revisions to the draft (30 days)
- Draft to the Federal Register for public review/comment (30 days)
- NHQ review/revisions (30 days)
- Standard delivered March-April, 2011

590 Update
NRCS Goals in General

- Better science and improved technology
- Flexibility in nutrient planning to the extent that science supports it
- Nutrient plans that are helpful and understandable
- Nutrient plans must be defensible when challenged

590 Update- Changes

- More discussion of air quality
- Encourages discussion of saline soil/manure salt issues, where pertinent
- Requires lab proficiency testing programs
- No surface applications to frozen or snow covered ground
- Organic Farming, Precision Farming
- More discussion of N use efficiency strategies
  - Adaptive management
  - Slow release, enhancement, and inhibitor technologies
- Phosphorus risk assessment tools

What USDA Wants

- A way to quantify P losses to enable improved conservation measures
- National standardization of P risk tools:
  - The way they look and feel
  - Risk categories
  - Response to risk categories, i.e., similar treatment for similar risk
- “Redlines” when PI results equate to very high risk to the environment
  - No dumping, apply at reasonable rates to avoid imposed restrictions on field use

SERA-17 Recommendations

- Long-term Goals [next generation PI tool]
  - Develop National, or Regional, PI tool
  - Validate and test the next generation PI concept
  - Standardize the risk assessment approach in all States, but State's uniqueness is accommodated.
- Short-term Goals [improve current tools]
  - Define minimum requirements for all PI tools;
  - Establish when the PI should be used
  - Standardization of risk categories
  - Chart a course for achieving the long term goals

SERA-17 Recommendations
590 Criteria

- When is a Phosphorus Risk Assessment Required?
  - When nutrients are applied in excess of LGU recommendations OR
  - In areas with identified or designated water quality impairment

SERA-17 Recommendations
590 Criteria

- When does the 590 Standard apply?
  - Where ever nutrients are applied for crop production

- When does the 590 Standard Not apply?
  - When manure is applied at “disposal rates”

    [> 10 times the critical soil test response value for common crops-established by the LGU]

SERA- 17 Recommendations
590 Criteria

- Erosion rates shall not, on average, exceed “T” for the length of the rotation/planning period. If erosion rates are expected to increase (>T) during any segment of the rotation/planning period then BMPs must be installed/maintained to adequately prevent degradation of air, soil and/or water quality.

SERA-17 Recommendations
590 Criteria

- Must consider nutrient losses due to wind and water erosion;
- When manures are applied, the P risk assessment shall be based on the annual soil loss value associated with the crop interval including the manure application;

SERA-17 Recommendations Minimum Requirements All PI Tools

590 Criteria

- Must consider STP, erosion, runoff, and leaching (leaching if applicable);
- Must demonstrate that risk increases with increasing STP, erosion, runoff and leaching (leaching if applicable);

SERA-17 Recommendations
590 Criteria

- When PI results equate to very high risk for phosphorus transport, the interpretation of results shall be that No Additional Phosphorus is Allowed (any form)
- When PI results equate to high risk for phosphorus transport, the interpretation of results shall call for P-based nutrient applications.

SERA-17 Recommendations
590 Criteria

- When suitable water quality data is not available, a nonpoint source model (APEX), or similar Nationally approved model, shall be used to establish risk category application rate limits and to demonstrate that very high risk categories disallow additional P applications.