

NM TIER 2 REPORT

Substantive changes from Tier 1 Approved Interim report following:

1. October face-to-face yielding unanimous decision
2. Public comments through 11/7 addressed by Panel

RECOMMENDATION

- The Panel proposes that FLNAM consistent with the definition has an EOS efficiency of:
 - 15.75 percent TN reduction and 20 percent TP reduction from land uses HWM and LWM.
 - 11.5 percent TN and 18 percent TP reduction from land HOM, PAS, HYM, ALF and URS.
- Retirement of:
 - Enhanced NM
 - Decision/Precision Ag

PROCESS

- Identified on-the-ground differences between Tier 1 and Tier 2
- Quantified benefits with extensive peer-reviewed literature search (with TT)
- Formed subgroups for 6 components of Tier 2 (beyond Tier 1)
 - manure incorporation,
 - manure application timing,
 - N split applications,
 - N fertilizer banding,
 - P site indices and
 - nutrient application setbacks
- Reconvened Oct 2014 to unanimously approve efficiencies based on all 6 components for Tier 2

EFFICIENCY BREAKDOWN

Table 2. TN & TP Efficiency Values for Tier 1 & 2, including increase from Tier 1 to 2 called “Benchmark”

Land Use	Tier 1 TN Reduction	Tier 1 TP Reduction	Tier 2 TN Benchmark	Tier 2 TP Benchmark	Tier 2 TN Reduction from No BMP	Tier 2 TP Reduction from No BMP
High-Till with Manure	9.25	10	6.5	10	15.75	20
Low-Till with Manure	9.25	10	6.5	10	15.75	20
High-Till without Manure	5	8	6.5	10	11.5	18
Pasture	5	8	6.5	10	11.5	18
Alfalfa	5	8	6.5	10	11.5	18
Hay with Nutrients	5	8	6.5	10	11.5	18
Nursery	5	8	6.5	10	11.5	18

BRIEF ACCOUNTING OF COMMENTS

- What is the supporting science?
 - 45 references peer-reviewed journal articles
 - 1 set of unpublished local data
- What other factors were included?
 - Panel of regional experts' BPJ
- What "science" was considered?
 - CEAP
 - Enhanced NM & Decision Ag efficiencies
 - Fertilizer sales data
 - Mid-Atlantic Water Program manure estimates
 - Crop yield data
 - Current model nutrient needs

BRIEF ACCOUNTING OF COMMENTS

- When did this BMP first exist on-the-ground?
 - By most state's accounts, Tier 2 plans were first officially written in 2005, but was not widely adopted or planned until 2006.
 - Tier 1 plans were commonly written before 2006.
 - There was a lag from science to policy for these reasons
 - Land Grant University adoption of identified components in their recommendations.
 - Regulations had to be written and adopted.
 - Plans are typically written every three years, so Tier 1 plans were replaced as they expired.
- What makes a Tier 1 or 2 plan count?
 - It is formally written and approved by a professional
 - It is adopted and followed by the producer
 - These actions are verifiable, recorded and submitted by the reporting State agency

BRIEF ACCOUNTING OF COMMENTS

- Did the panel provide any information on how to verify a plan is being followed?
 - No. This question is explicitly not the job of the panel. This consideration was not made during panel selection and the panel did not have the expertise to address it.
 - This question has been answered by the Ag Management Plans Subcommittee of the AgWG and their finding are included in the Ag sector verification guidance which is part of the partnership approved Verification documents.
- When does the panel expect Tier 2 to be available to the states for "Progress Runs?"
 - The Panel produced its Tier 2 recommendations in October 2014
 - Following the BMP protocol, the Panel recommends including Tier 2 NM in the 2014 Progress Run.

NOTE ABOUT COMMENTS

- It should be noted that while individual panel members may have expressed caution over data availability for a specific component area, panel members came together to deliberate and debate how these components work together across the agricultural landscape to arrive at the newly proposed benchmark values. No dissenting opinions were logged during the formulation of the Tier 2 benchmark efficiencies and these values represent the collective best professional judgment of this expert panel.

NEXT STEPS

- Seek approval by AgWG, WTWG and WQGIT.
- Work with CBPO to incorporate Tier 2 NM into NEIEN and Scenario Builder for 2014 Progress
- Format report with Tetra Tech for publishing.
- Meet with Ag Modeling Subcommittee to plan Phase 6 recommendations.
- Produce Phase 6 BMP report for all 3 NM Tiers.