Phase 6 Nutrient Management Expert Panel

CBP Agriculture Workgroup

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Core Nutrient Management Practices: (Assuming these are verifiable and being used)

- Method of determining nutrient application rates based on contemporary LGU guidelines for rate and timing at the field level
  - Soil tests for P – field level
  - Manure analysis and volume – test or book value
  - Spreader/applicator calibration
  - Yield estimates and Cropping plan – field level
  - Cropping and manure history – field level
- Consequence of implementation of these practices: Neutral – no efficiency credits and no negative performance efficiency in the Chesapeake Bay models. This assumes that credit for core nutrient management is built into the Phase 6 model baseline.
- Reported as a %.

For those who do not meet the all of the core practices:

- Consequence: Negative performance efficiency credits in the Chesapeake Bay models.

Supplemental Nutrient Management Best Management Practices Menu

- <u>Evaluated practices under consideration for Phase 5.3.2</u>
  - PSNT
  - CSNT
  - FSNT
  - ISNT
  - Variable rate N
  - Soil tests and manure analysis no more than 3 years old
  - Split applications
    - Timing
    - Side dressing
  - Placement options for fertilizers and manures
  - Manure export
  - Cover crop – link back to Cover Crops panel
  - Conservation tillage – link back to Conservation Tillage Panel
    - Residual Biomass management – link to CTP and MIIP
  - Field buffers – link back to Forest Buffer Panel

Supplemental Nutrient Management Best Management Practices Menu

- <u>Practices to be evaluated for Phase 6</u>
  - Variable rate P
  - P-based manure rate based on crop removal
  - Split applications – Fertigation – link back to Cropland Irrigation panel
  - Source material options – alternative fertilizers and additives
    - Manure- Link to Manure Technology Panel
    - Fertilizer
  - Soil test P remediation/declining
  - Zero P application
  - Irrigation management – link to Cropland Irrigation panel
  - Controlled drainage – linked to Tier 3 Priority Panel
    - Drainage ditch filters
  - Grid soil sampling
  - In-season sensors/remote sensing in general
  - Yield mapping
  - On-farm replicable trials/data
    - Strip-trials
  - Geo-spatial mapping
  - Whole farm balances
  - P-loss risk assessments
    - Particulate P loss pathways
    - Dissolved P loss pathways
    - Source P losses
    - Soil P saturation
  - N-loss risk assessments, including Nitrogen rate models
    - Ammonia loss
    - Denitrification
    - Leaching
  - Nutrient application setbacks

		Full Season Soybeans	Grain w/ Manure	Grain w/o Manure	Legume Hay	Silage w/ Manure	Silage w/o Manure	Small Grains and Grains	Small Grains and Soybeans	Specialty Crop High	Specialty Crop Low	Other Agronomic Crops	Other Hay	Pasture
Practices evaluated under Phase 5.3.2	Sub-practice													
PSNT			N	N		N	N							
CSNT			N	N		N	N							
FSNT								N	N					
ISNT			N	N		N	N							
Variable rate N			N	N		N	N	N	N					
Manure analysis < 3 years old		N P	N P		N P	N P		N P	N P				N P	N P
Soil tests < 3 years old		P	P	P	P	P	P	P	P	P	P	P	P	P
Split applications			N	N		N	N	N	N				N	N
Placement options for fertilizers and manures		N P	N P	N P	N P	N P	N P	N P	N P	N P	N P	N P	N P	N P
Cover crop – link back to Cover Crops panel														
Conservation tillage – link back to Conservation Tillage Panel														
	Residual biomass mgmt													
Field buffers – link back to Forest Buffer Panel														