AOAC International Update

- **Four Funded Methods**
- **One Additional Method (Urea)**
- **Five Champions**
- **Journal Of AOAC International Articles – All Open Access**
- **ERP(s) Convened**
- **Five Sets of Evaluations**
- **Five Separate Paths**
- **Great Help & Support From Nancy Thiex**
- **Three are Approved and Two Still In-Process**
- **Forum Is A Great Place To Take Next Steps**
- **Validation Will Continue With Your Support**

AOAC 2015.15 Update

- Slow & Controlled Release Extraction
  - Study Director – Bill Hall
  - Three JAOAC Articles - Accelerated and Soil Extractions & Correlation
  - Protocol Ready for Approval
  - Invitation Letters Going Out in March to ~20 Laboratories
  - ~ Thirty Samples (in Duplicate), Plus Four Familiarization Samples
  - Equipment for 12 column System - $10-$12K
  - Samples Sent in May/June
  - Results Due in 3-9 Months

AOAC Official Method 2015.15
Nitrogen, Phosphorus, and Potassium Release Rates of Slow- and Controlled-Release Fertilizers
First Action 2015

[Applicable for the determination of extractable N, P (as P_2O_5), and K (as K_2O) and cumulative N, P, or K release in slow-release fertilizers (SRFs) and controlled-release fertilizers (CRFs).]

A. Principle

In Alternative A, a representative unground test portion is exposed to ambient temperature extractions of a solvent in a biologically active sandy soil medium. In Alternative B, a representative unground test portion is exposed to increasingly aggressive solvent temperature extractions. Extractions are designed to extract and isolate nutrients becoming available over time. Each extract is analyzed by AOAC procedures for the nutrient of interest (total N, P, and K). Along with analyses of total nutrients and reference materials, data are used to develop information specific to the cumulative percentage of nutrient released over time.

The Clock Is Ticking

IFA Method Harmonization WG

2016-2017 Activities

Last Meeting Hosted By Mosaic FL

Projects

- Determination of water-soluble phosphate and phosphate-soluble in neutral ammonium citrate
- Total nitrogen in complex fertilizers overview
- Procedures to sample bulk bags (super sacks/totes/big bags)
- Methods to determine elemental Sulphur
- Next Meeting in Morocco (aligned to ISO-TC 134) May 2017

FFAA Blend Sampling Spreading Study

- Phase I
  - Three Blends Blender Discharge, Hopper and Spreader
  - Learn How To Do Phase II
- Phase II
  - Avoid Phase III
  - More Statistically Designed to Support Final Conclusions
  - Complete Mixing, Sampling & Spreading Early 2017
  - Complete Analytical Work and Statistical Review Late 2017

Formulations Phase II

15-5-15 - Two 200 Lb. Batches in Mixer

- Pre-screen Materials to Meet SGN & UI Needs
  - Am Sulfate; Am Nitrate TSP; MOP; SOP; $MnSO_4$; Contaminant B
- Blend #1 – Matched Materials –
  - All ~3.00 mm (SGN 285-315) UI>50
- Blend #2– Mismatched Materials –
  - 2.00 mm – 3.50 mm (SGN 200-350, UI - TBD)
- Add Holding Hopper At Mixer Discharge

Formulation Phase II

	FFAA Blending Size Study			
210 lb	**Matched**	**Mismatched Materials**		
Material	**SGN 300**	**~200**	**~300**	**~350**
Am Nitrate	63.0	63.0		
Am Sulfate	47.8	47.8		
TSP 300	22.8		22.8	
MOP	40.2			40.2
SPM	31.5			31.5
$MnSO_4$	3.7			3.7
B_2O_3	1.0			1.0