

## ***PA- Supplemental Guidance***

**WQL-06**     **Apply Controlled Release Nitrogen Fertilizer** – Applies only to commercial/chemical nitrogen fertilizers. There is no approved product to treat manure. Approved products include:

*2011-1 change: At least 50% of the pre-emergent and early post emergent nitrogen fertilizer used for crop production must be slow-release of controlled release formulations.*

1. Slow Release Urea Reaction Products
  - a. Granular Products
    - i. Ureaform fertilizers
    - ii. Urea-Formaldehyde Products
    - iii. Methylenediurea (MDU)
    - iv. Isobutylidene Diurea
    - v. Dimethylenetriurea (DMTU)
    - vi. Dicyandiamide (cyanoguanidine)
    - vii. Triazone
  - b. Liquid Products
    - i. Urea-formaldehyde solutions,
    - ii. Urea-triazone solutions
2. Coated or Encapsulated Products
  - a. Sulfur Coated Urea (SCU)
  - b. Polymer coated Urea (PCU)
3. “Conventional” non-controlled release starter fertilizer.
  - a. Up to 20lbs/ac N, in accordance with Penn State recommendations.

**Cropland – System/acre**

***Not compatible with ANM21, ANM22, SOE02.***

**Pastureland – System/acre**

***Not compatible with WQL07***

*2011-1 – took product names off of guidance. Call Mark Goodson to discuss products if needed.*

### **Definitions**

**Slow or Controlled Release Fertilizer** – A fertilizer containing a plant nutrient in a form which delays its availability for plant uptake and use after application or which extends its availability to the plant significantly longer than a reference “rapidly available nutrient fertilizer” such as ammonium nitrate or urea, ammonium phosphate or potassium chloride. Such delay of initial availability or extended time of continued availability may

occur by a variety of mechanisms. These include controlled water solubility of the material (by semi-permeable coatings, occlusions, or by inherent water insolubility of polymers, natural nitrogenous organics, protein materials, or other chemical forms), by slow hydrolysis of water soluble low molecular weight compounds, or by other unknown means.

**NOTE: Urease Inhibitors - Not acceptable for WQL06 but can be used for AIR02. Urease Inhibitors stop volatilization of N and thus it is used as an Air enhancement.**