

## Competency Areas

### Certified Professional Fertilizer Applicator Exam

- I. **Environmental Benefits & Risks of Turf as a Ground Cover** (4 questions)
  1. What are the benefits of turf as a ground cover?
  2. Which nutrients harm water quality?
  3. Process by which nutrients harm water quality.
  
- II. **How Grass Grows** (4 questions)
  1. Which grasses are cool season, & when do they grow best?
  2. Which grasses are warm season, & when do they grow best?
  3. What factors affect the health & vitality of grass?
  4. Best time to fertilize cool & warm season grasses.
  
- III. **Soils and Fertility** (6 questions)
  1. Knowledge of terms; horizon, porosity, texture, bulk density, pH, CEC, compaction, organic matter.
  2. Effect of each of the above on plant growth
  3. Composition of soil – sand, silt, clay, OM
  4. Considerations for sandy soil
  
- IV. **Soil Testing** (4 questions)
  1. When testing is required
  2. How to test
  3. Use of approved labs
  4. Determining MD FIV, and recommendations
  
- V. **Interpreting a Fertilizer Label** (8 questions)
  1. What is required on label?
  2. Importance of N fertility
  3. Grade & guaranteed analysis
  4. Determining nutrient content and % slow release N
  5. Nutrient ratios
  6. WIN, WSN, slowly available water soluble nitrogen
  7. Use of liquid fertilizer
  8. Determining nutrient content of liquid fertilizer
  
- VI. **University of MD Fertilizer Recommendations & Nutrient Needs of Grass** (7 questions)
  1. Nutrients, where they come from, difference between primary macronutrients, secondary macronutrients, and micronutrients
  2. Management practices and other factors affecting the nutrient needs of grass
  3. Appropriate use of soluble and slow release nitrogen
  4. Use of compost & soil amendments
  5. Liming

- VII. **Use and Calibration of Application Equipment** (7 questions)
  - 1. Types of dry fertilizer application equipment, advantages & disadvantages
  - 2. Types of liquid fertilizer application equipment, advantages & disadvantages
  - 3. Swath width
  - 4. Calibration math
  - 5. Purpose of calibration
  - 6. Calibration methods in general
  - 7. Components of application equipment, tips, deflector shield, boom, etc.
  
- VIII. **Requirements for Professional Fertilizer Applicators** (6 questions)
  - 1. Blackout dates
  - 2. Organic P<sub>2</sub>O<sub>5</sub> restrictions vs. inorganic restrictions
  - 3. Nitrogen restrictions
  - 4. P<sub>2</sub>O<sub>5</sub> restrictions
  - 5. Setbacks from water and other restrictions
  - 6. Recordkeeping
  - 7. Enhanced Efficiency Fertilizer
  - 8. Certification & Licensing requirement
  
- IX. **Other Environmental Laws & Regulations** (2 questions)
  - 1. Understand that a fertilizer license does not authorize an applicator to apply pesticides, including weed and feed.
  - 2. General purpose of each law mentioned
  
- X. **How to Measure Your Lawn** (2 questions)
  - 1. Formulas for area measurements