FERTILIZE WOODY ORNAMENTALS THE RIGHT WAY

Taken from: *Grounds Maintenance*, Sept. 1999 by Stuart Warren, North Carolina State University

DESIGNING A FERTILITY PROGRAM

- **Step 1:** Maintain soil pH between 5.5 and 6.5 for most plants
- **Step 2:** Soil test to determine P and K needs
- **Step 3:** Manage N by choosing proper N source

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- **Soil pH**
  - Check pH yearly or every 2 to 3 years
- **Phosphorus and potassium**
  - Soil test is needed to determine P and K needs
  - P moves slowly in the soil
  - Apply P before you plant
  - No evidence to support that P promotes new root growth if it is not deficient to begin with

DESIGNING A FERTILITY PROGRAM

- **Nitrogen**
  - Universally deficient
  - Soil testing for N has very little value

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- **Growth state categories**
  - **Category 1: Newly transplanted specimens**
    - Each plant species has its own root:shoot ratio
    - N rates suppress root growth and increases shoot growth
    - Provide water to a reduced root system **Recommendation**: No N or a maximum of 1 pound per 1,000 square feet during the establishment phase (months or years)

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- **Growth state categories**
  - **Category 2: Well established plants or "growth phase"**
    - Best time to apply N
    - **Recommendation:** apply N at 2 to 4 pounds per 1,000 square feet

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- **Growth state categories**
  - **Category 3: Healthy landscapes**
    - **Recommendation:** apply N to mature plants at 1 pound per 1,000 square feet every 2 to 4 years
    - Never need to fertilize a mature tree growing in fertilized turf

DESIGNING A FERTILITY PROGRAM

- **When to apply fertilizers**
  - **Once annually**
    - Apply in fall or late winter/early spring
    - Before bud break
  - **Split application**
    - More effective and efficient than single application
    - Applied in fall and spring

SUMMARY

- Soil pH
- Phosphorus and potassium
- Nitrogen
- Growth rate categories
  - Newly planted specimens
  - Well-established plants
  - Healthy, attractive landscapes
- When to apply fertilizers
  - Once annually
  - Split application