Preserving The Urban Tree Canopy

Green Neighbor Forum 2015

Dan Yates, Bartlett Tree Experts (MD Tree Expert #1618)

Introduction

Dan Yates, Arborist Representative

ISA Certified Arborist #PD-1514A
MD Licensed Tree Expert #1618
PA, MD, WV Licensed Pesticide Applicator

Bartlett Tree Experts

A TCIA Accredited Co.

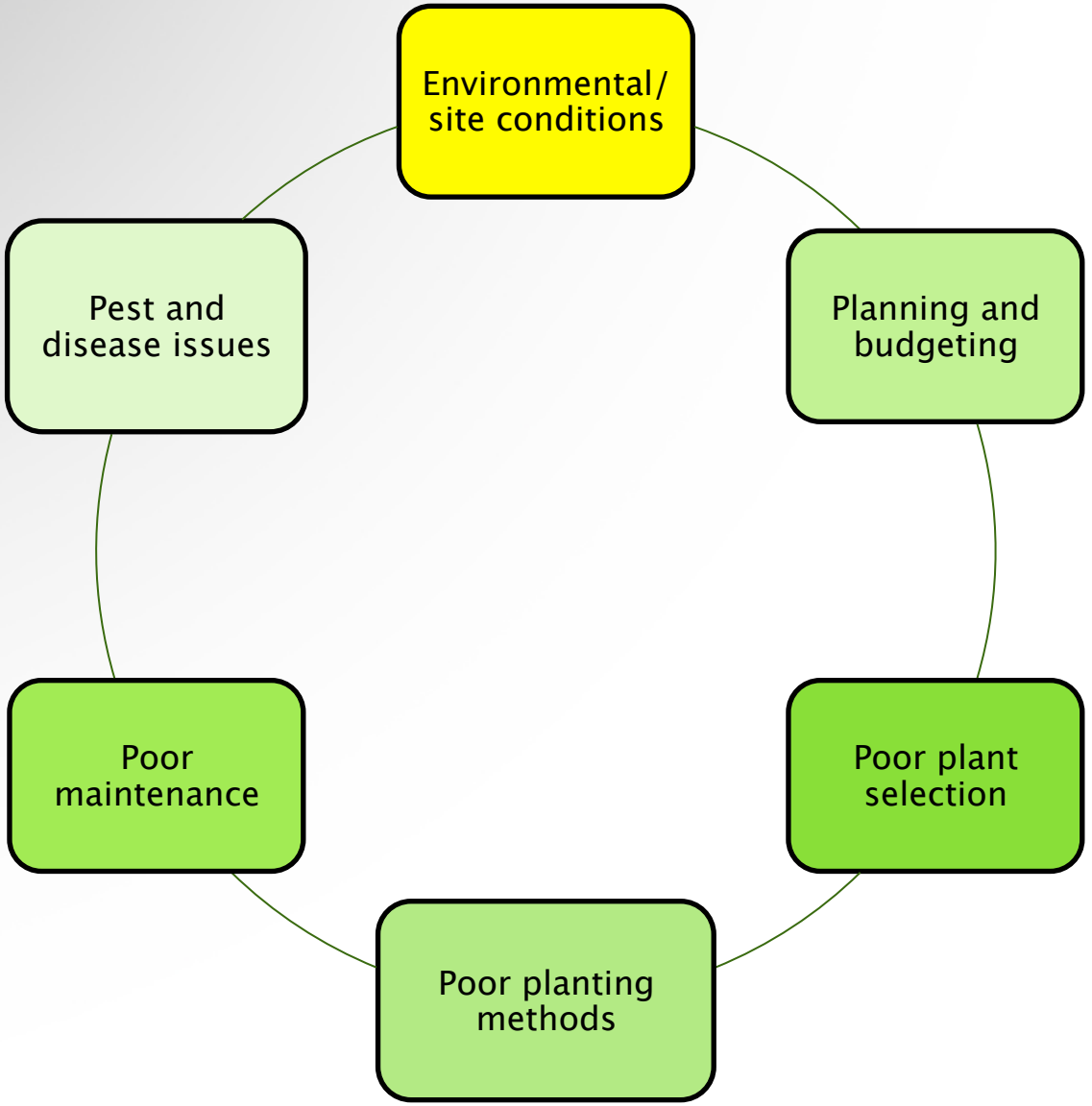
Headline: Tree Killers Rampant In Your Landscape Now!!

- Emerald Ash Borer
- Boxwood blight
- Gyspy moth
- Hemlock woolly adelgid
- Asian longhorn beetle
- Oak wilt
- Bacterial leaf scorch
- Thousand canker disease
- Gloomy scale
- Ambrosia beetles
- Anthracnose

“A little learning is a dangerous thing;
drink deep, or taste not the Pierian spring:
there shallow draughts intoxicate the brain,
and drinking largely sobers us again.”

Alexander Pope
(1688–1744)

Biggest Challenges to Preservation



Environmental/Site Conditions

- Start with knowing what you've got – consider soil sampling
- Soil type (clay, loam, sandy)
- Soil moisture/drainage
- Light profile (sunny, part shade, shade)
- pH and nutrient content
- Compaction
- Organic matter

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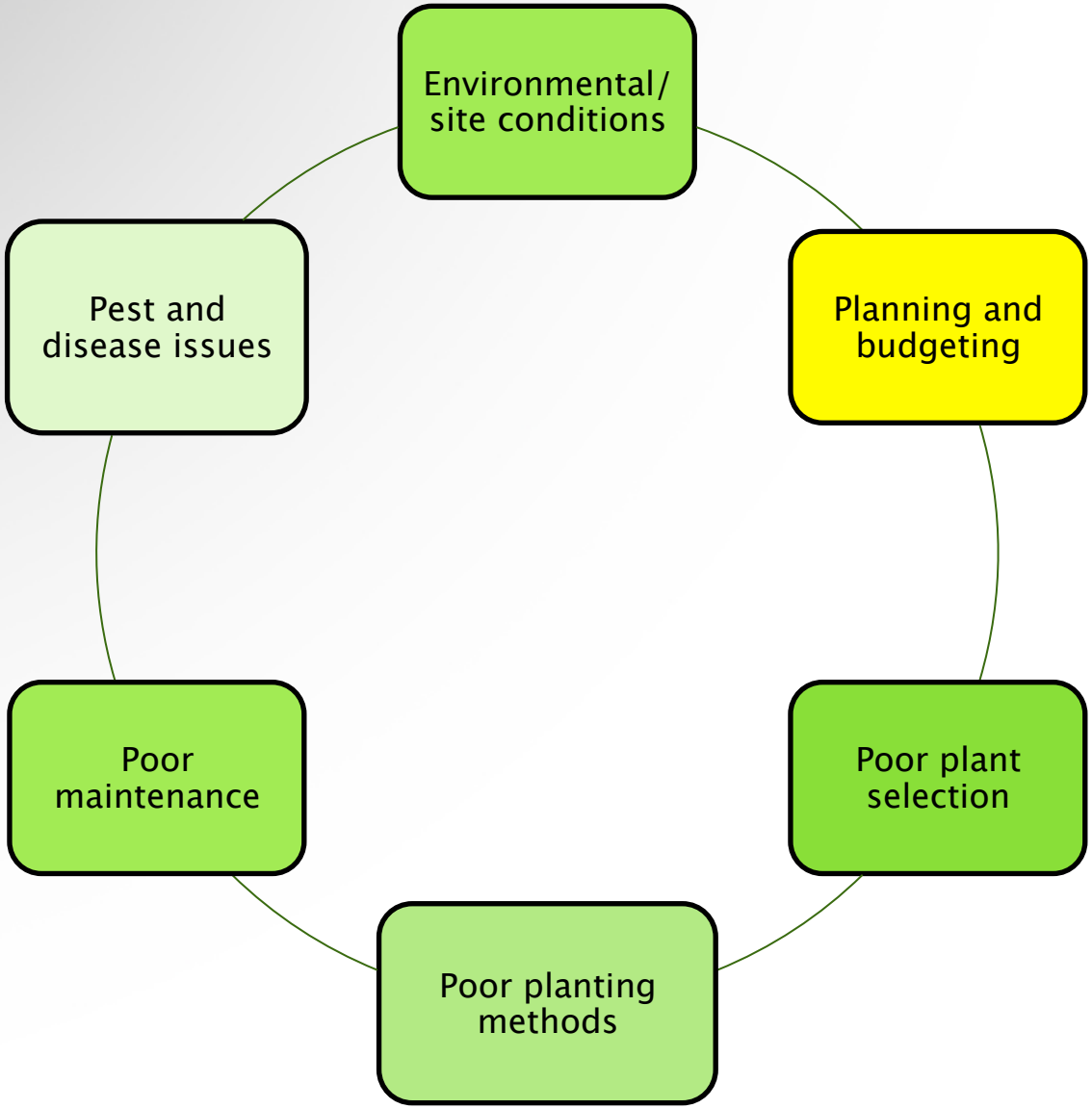

Planning and Budgeting

- Design around your goals (seasonal color, consistent flowering, shade, temperature regulation, screening, etc.)
- Consider the mature size and root space needs of the plants in your design
- Start with the big pieces and work down (grading, hardscaping, irrigation, big trees, small trees, shrubs, etc…)
- Group plants with similar site needs (water loving, shade loving, etc.)
- Budget for installation and maintenance (there are no maintenance free trees!)

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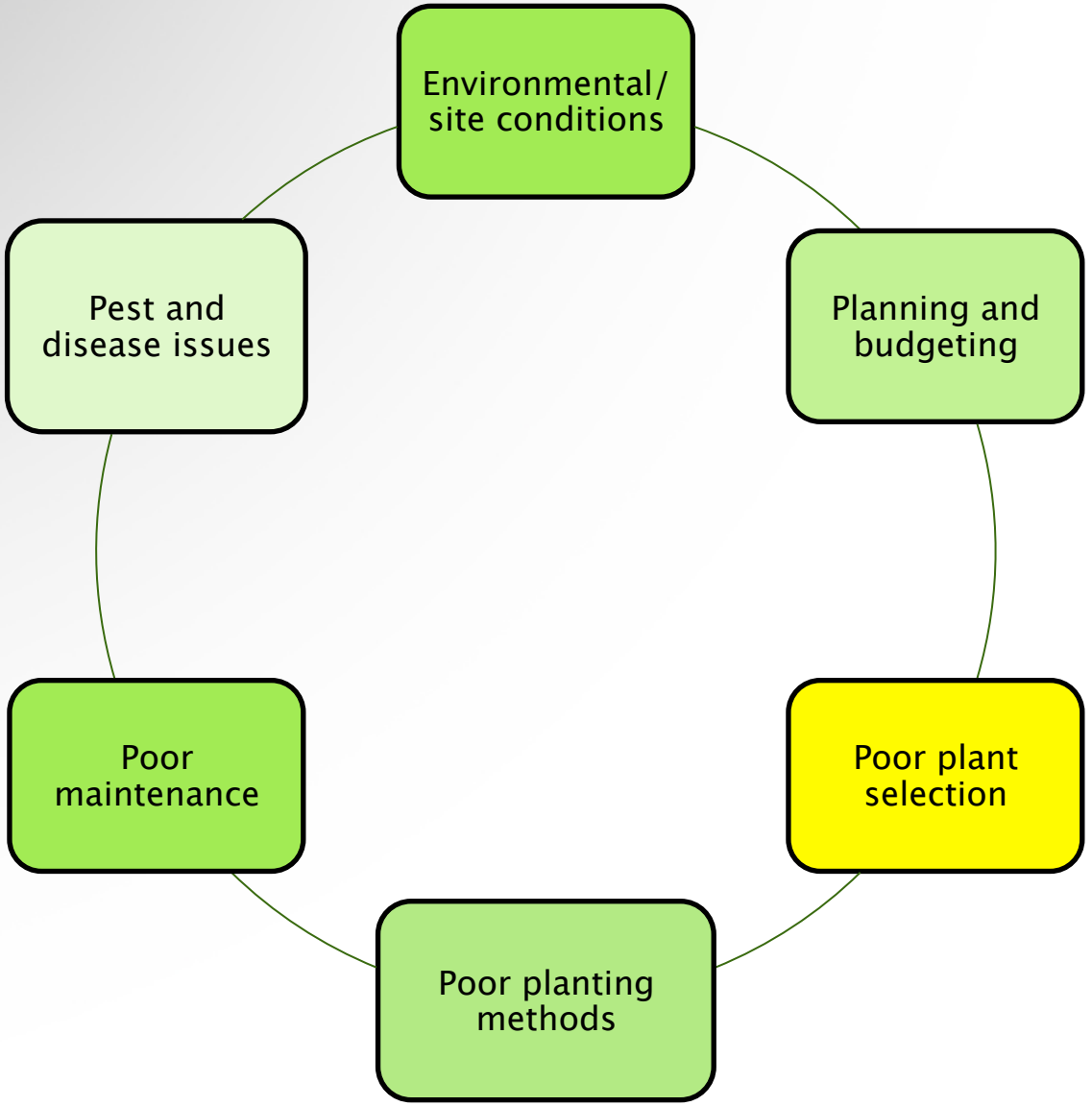


Plant Selection – avoiding common mistakes

- Most people select plants for aesthetics
- Match the plants to the site (light, soil, moisture, cold hardiness, wind, etc…)
- Native vs non-native (regional native, site condition native)
- Know the source of the plant
- Pick your specimens carefully – look at the roots!!! (…and color, leaf size, root to crown ratio

Plant Selection – avoiding common mistakes

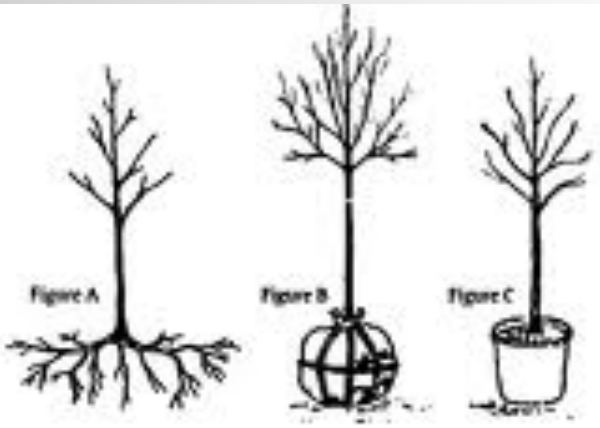
White pine

- Native to MD
- Likes acidic soil
- Moist loam to sandy loam
- Well drained soil
- High OM

This site

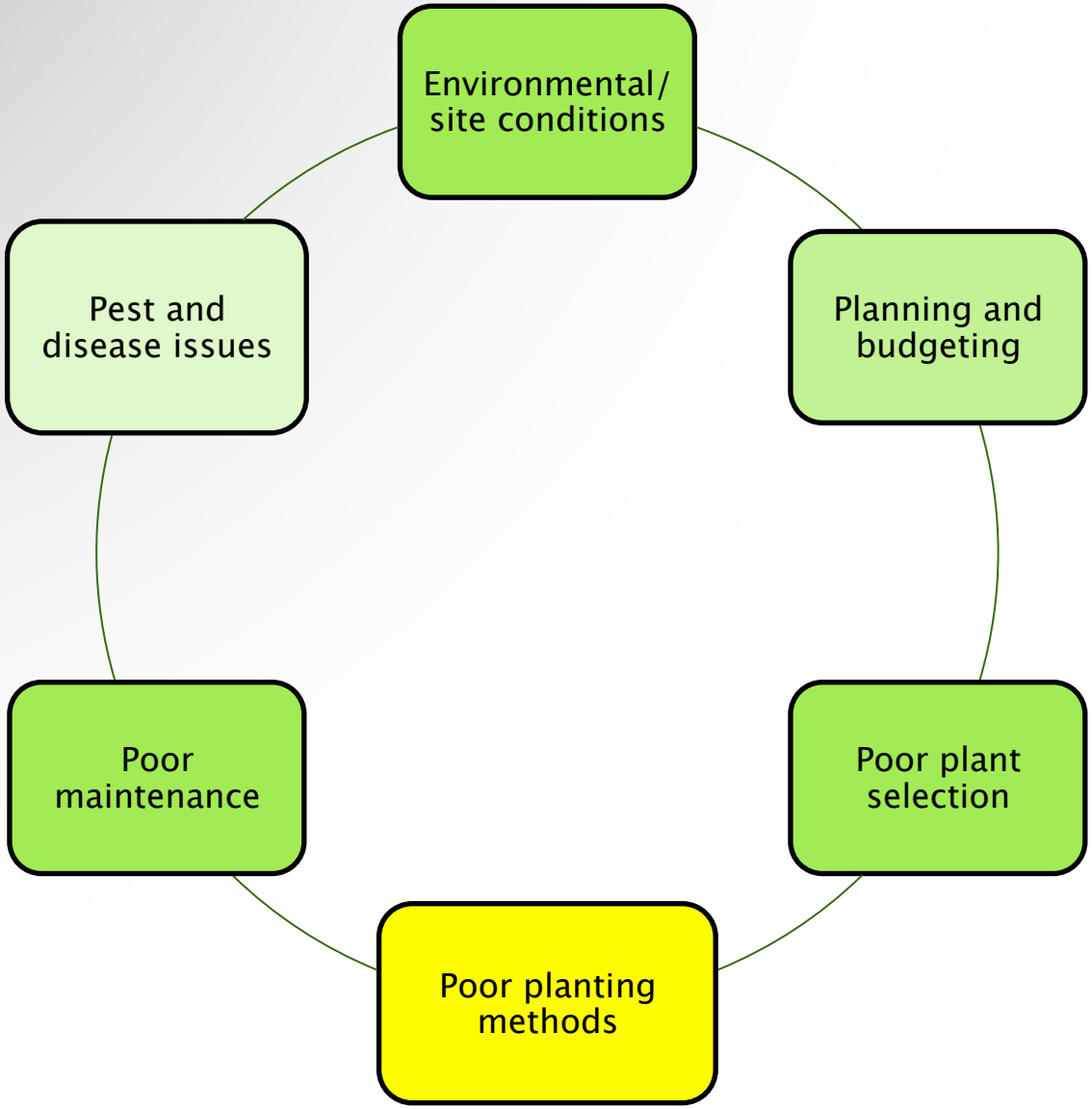
- Soil pH – 8.2
- Compacted clay
- Heavily salted road and lot
- Hot and dry
- Very low OM

Plant Selection: Container, B&B, or Bare Root

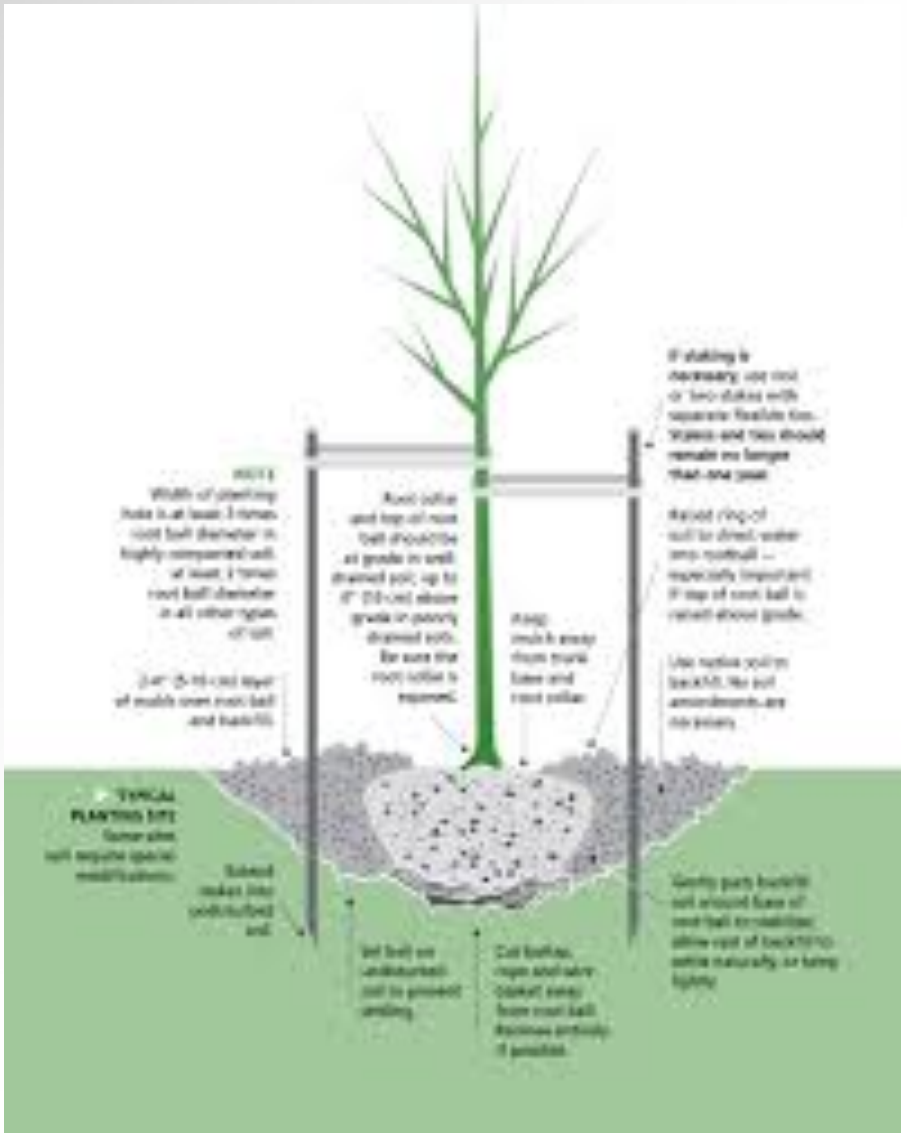


Trees are usually obtained from nurseries and garden centers as bare root stock (Figure A), balled and burlaped stock (Figure B), or container plants (Figure C).

Biggest Challenges to Preservation

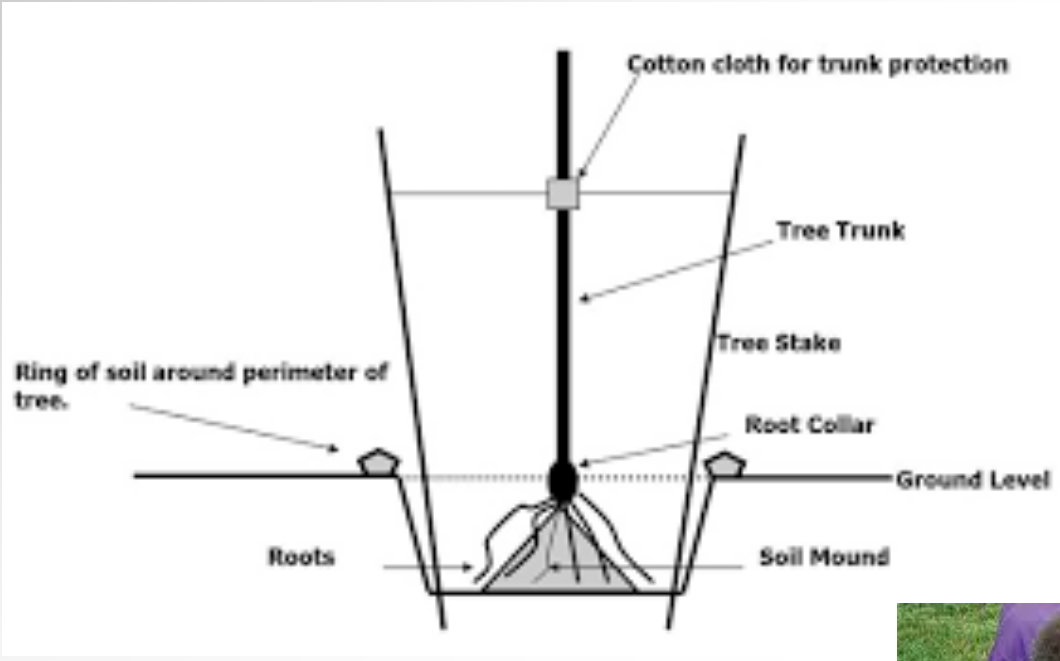


Proper Planting



Proper Planting: Container, B&B, or Bare Root

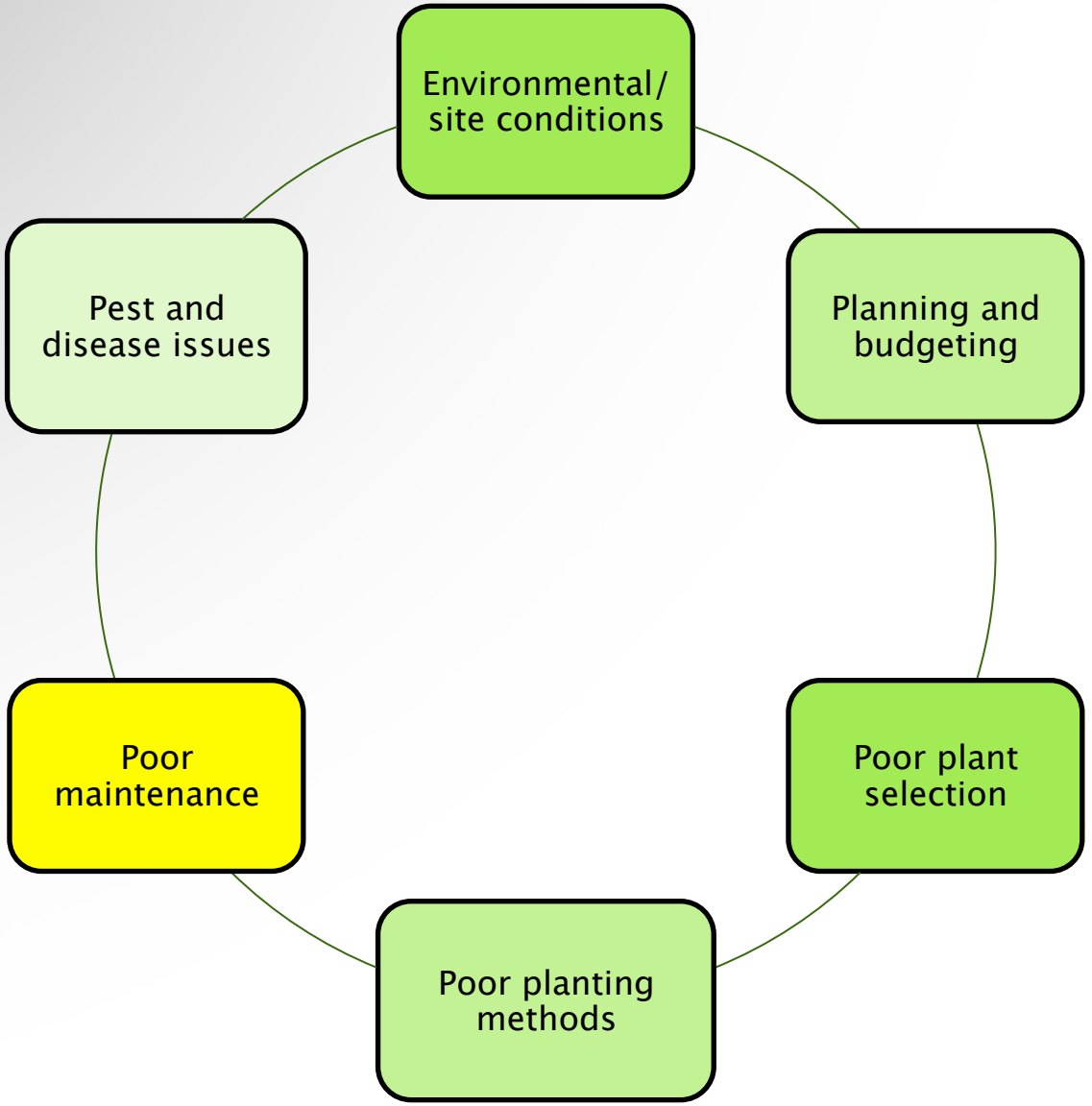
Proper Planting – bare root



Proper Planting – FAQs

- To amend or not to amend the soil?
- Mulch?
- How much should we water?
- Fertilization?
- Guying/staking?
- Pruning?
- Shelters?

Biggest Challenges to Preservation



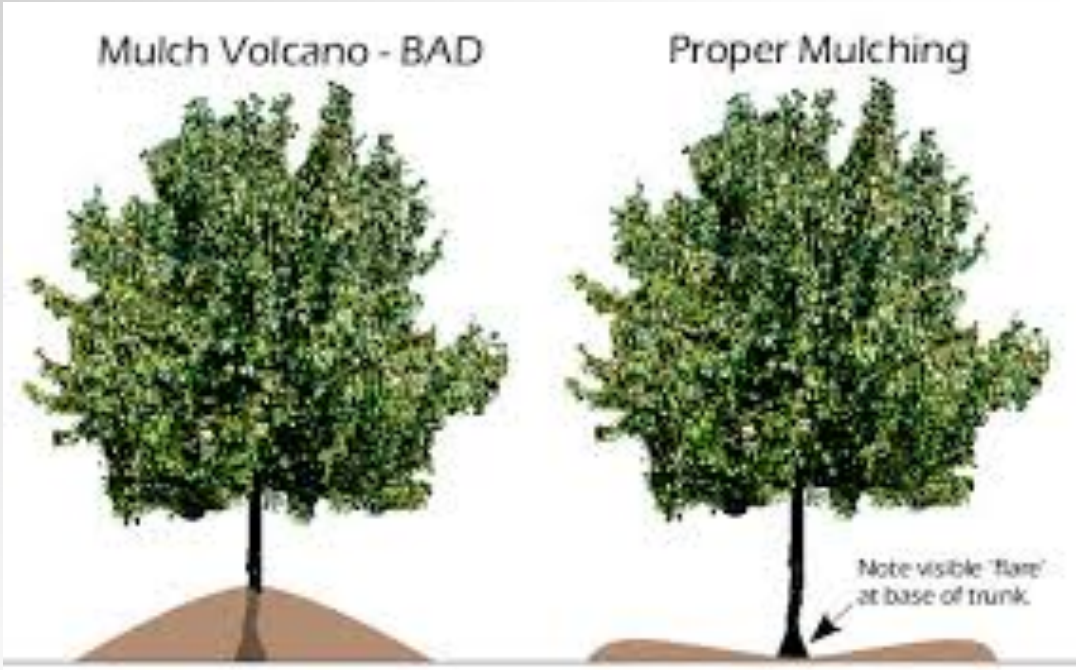
“Help!! What do I do?”

By the time most people ask this question, its already too late

Proper Maintenance and Protection

- Scheduled inspection/observation
- Mulching
- Irrigation
- Fertilization
- Root care/excavation
- Pruning
- Cabling and bracing
- Lightning protection

Proper Maintenance – Mulching



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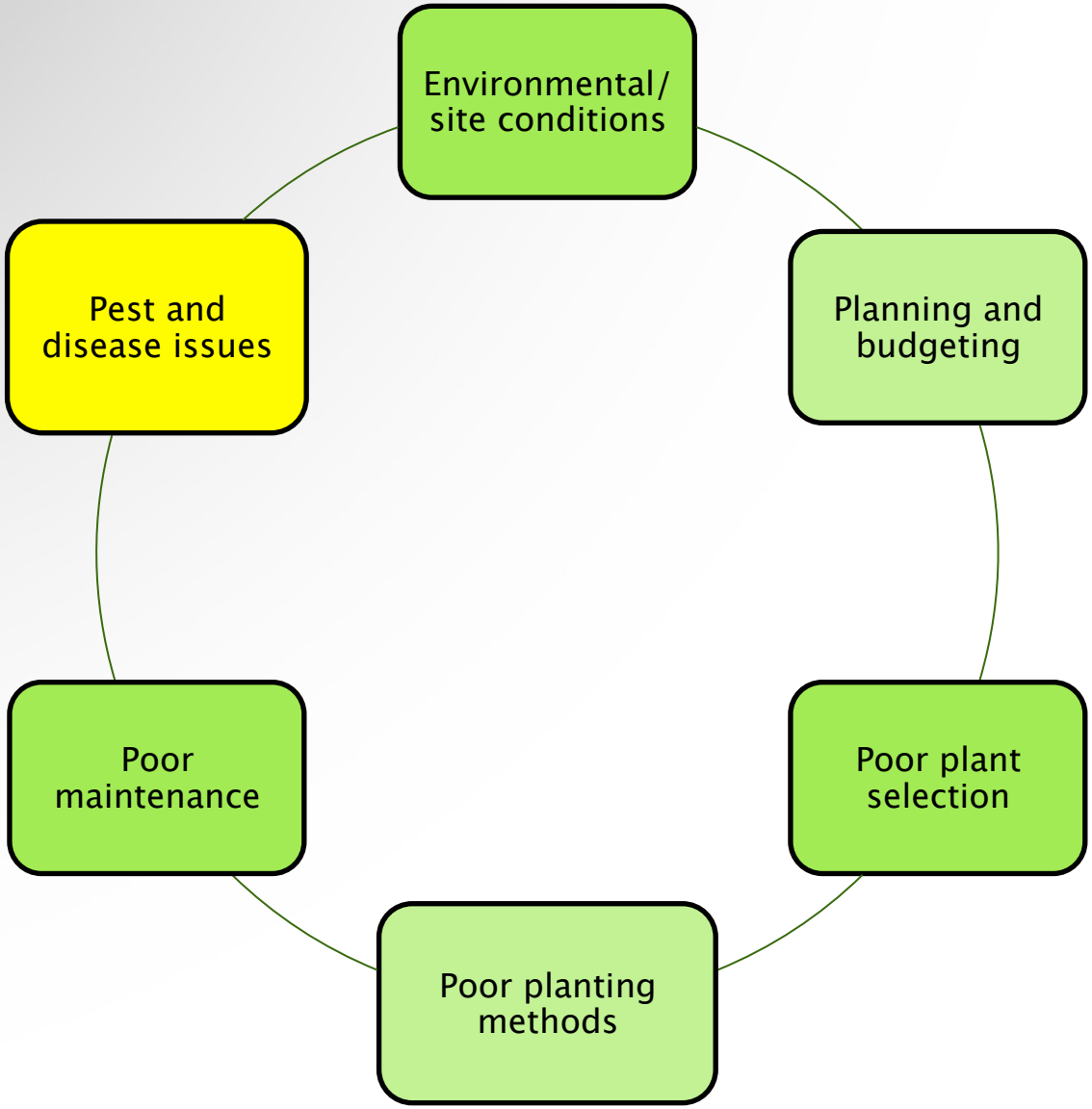

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Pest and Disease – Top 5 MD Threats

- Emerald Ash Borer (EAB)
- Gloomy scale (and other scales)
- Bacterial Leaf Scorch (BLS)
- Fungal diseases (anthracnose, blumeriella, needlecast, tubakia)
- Phytophthora root rot and canker diseases

Emerald Ash Borer

Emerald Ash Borer

- Invasive species from China
- Est. 150-200 Million trees killed so far
- Affects all species of ash
- May be spreading to other tree species (recently found in fringe tree)
- Quarantine methods ineffective
- Emmamectin benzoate very effective
- Treatment cost $12-15/inch DBH

Gloomy Scale

Gloomy Scale

- Primarily pest of red maple
- Armored sucking insect
- Multiple generations per year
- Kills in 2-4 years of infestation
- Controlled with horticultural oil and crawler treatments

Bacterial Leaf Scorch

- Multiple host species: red oak, red maple, planetrees/sycamore, elm, pecan, sweetgum
- Spread by leaf-hoppers
- Slow, steady decline, exacerbated by drought
- Wilt disease – bacteria clog the vascular system
- Managed (but not cured) with antibiotics

Leaf/needle diseases

- Anthracnose – dogwood, oak, maple, sycamore
- Blumeriella – flowering cherries
- Tubakia – red oaks
- Entomosporium – photinia, cherry laurel
- Needlecast – pines, spruces, firs
- Diplodia – all two needled pines

Remaining pests and diseases

- Phytophthora root rot and canker
- Ambrosia beetles

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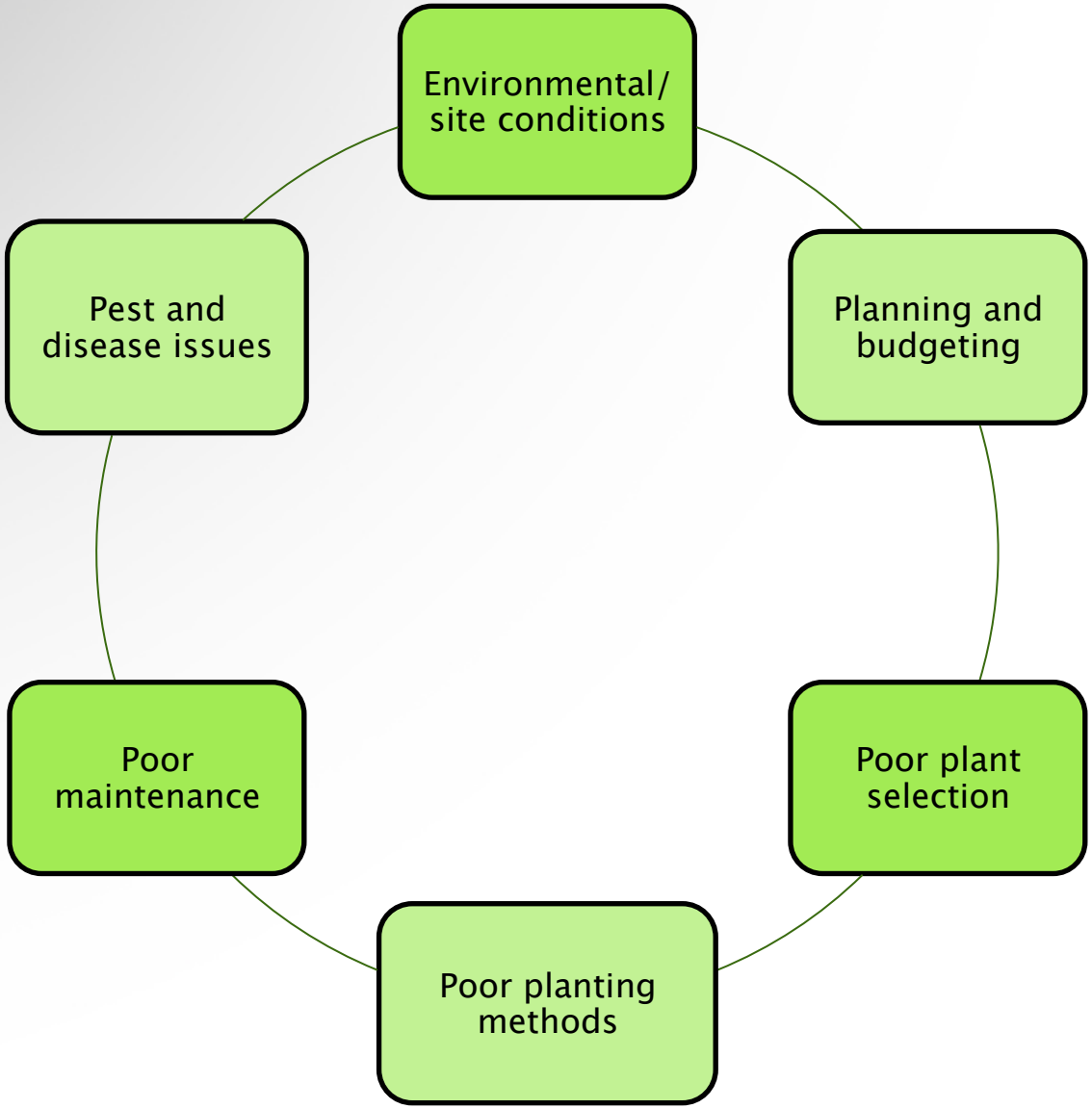

Thank-you!

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