Urban Tree Selection & Maintenance

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Aspects of Urban Tree Selection

• Site Conditions in an Urban Setting

• Desired Benefits

• Choosing a plant

• How to Plant & Continued Maintenance and Training

• Unique Species
What is the number one pest in the urban forest?
## Average Tree Lifespans

<table>
<thead>
<tr>
<th>Species</th>
<th>Average Life Span</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bur Oak</td>
<td>250+ years</td>
</tr>
<tr>
<td>Red Maple</td>
<td>125+ years</td>
</tr>
<tr>
<td>River Birch</td>
<td>65+ years</td>
</tr>
<tr>
<td>Chuck Grassley</td>
<td>36 years</td>
</tr>
<tr>
<td>Urban Trees</td>
<td>&lt;25 years</td>
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</tbody>
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Adapted from Lindsey Purcell – Purdue University
Urban Underground
Urban Water Flow
Available Sunlight – Directions Matter

In Iowa, generally speaking:
- Maximize southern & eastern sunlight into home
- Minimize north & west wind exposure
Overhead & Other Considerations

• Be aware of overhead height restrictions
  – Power lines
  – Hang over above houses or property

• Chemical exposure
  – De-icing salts
  – Field pesticides

• Other surrounding considerations
  – Garden
  – Children
  – Property boundaries
Selecting a Plant
Species Selection

- DIVERSITY, DIVERSITY, DIVERSITY
- Soil pH & moisture tolerances
- Mature height
- Longevity – fast growing vs slow growing
- Desired benefits – shade, beauty, wildlife, etc
- Growth habit
Desired Benefits?

- Reducing home energy consumption
- Windbreak
- Noisy/snoopy neighbor
- Wildlife/Insects
- Hard working beauty – pretty all year
- Lazy beauty – pretty only for a few weeks
Placement is key
Growth Habit

Vase-shaped
American Elm

Oval
Kentucky Coffeetree

Pyramidal
Littleleaf Linden
Growth Habit

Round
Red Horsechestnut

Columnar
Tulip Tree

Spreading
Red Oak
Planting and Continued Maintenance
Proper Planting

• Work to find root flare and first large roots
  – These will determine planting depth!

• Hole should be 1.5x wider than root ball, relatively solid bottom, 45° sides roughed up

• Retain soil to be used as backfill
Proper Planting
**Balled & Burlapped**

- Burlap, twine and cages should be removed
- Can use burlap and twine to help lift tree into hole

**Container grown**

- Use pruners, hands or a knife to shear off outside ~1 inch to reduce risk of circling roots
- Gently loosen bottom of root ball if bound
**Staking**

- Helps strengthen main stem, especially important on exposed sites or high wind areas
- Stakes should be low on the trunk
- Prevent movement of the lower trunk and roots but allow movement of top canopy
- Ensure stake ties are not too tight
- Must remove or adjust ties each year due to growth
Mulching

• 3-4 inches deep organic mulch around tree

• Create a donut shape, keeping mulch away from trunk

• Extend to drip line of tree

• Helps prevent ‘mower blight’
Watering

- It depends!
- Depends on:
  - weather
  - rainfall
  - water retention of soil
- Newly planted trees might need irrigation 1-3x per week
- Water whole root system, drip line and beyond
- Do not water stem of tree → decay
Only the Beginning.....

• Promoting healthy, long-lived trees is a continual process

• Pruning schedule beginning after tree is established
  – Wait 3-5 years for tree to get established
  – Yearly or biennial pruning

• Observe tree each year, look for:
  – symptoms/signs of pests or diseases
  – dead or dying branches
  – potential structural improvements
Urban Species – Large Shade Trees
Bald Cypress – *Taxodium distichum*

- Height & Spread: 50-70’ x 25’
- Growth Habit & Rate: Pyramidal, Slow
- Disease & Pests: Minimal
- Soil & Moisture: Well adapted for all
- Features: Loses all needles in fall, wildlife
Ginkgo – *Ginkgo biloba* ‘Autumn Gold’

- Height & Spread: 25-50’ x 25-35’
- Growth Habit & Rate: Pyramidal & Spreading, moderate
- Diseases & Pests: Minimal
- Soil & Moisture: Well adapted for all
- Features: Tolerates harsh environments, unique leaf shape

*****Male only*****
Kentucky Coffeetree – *Gymnocladus diocus*

- Height & Spread: 60-75’ x 40-50’
- Growth Habit & Rate: Oval, slow to moderate
- Diseases & Pests: Minimal
- Soil & Moisture: Well adapted for all
- Features: Iowa native, seed pods throughout winter, wildlife
Northern Catalpa – *Catalpa speciosa*

- Height & Spread: 40-60’ x 20-40’
- Growth Habit & Rate: Irregular oval, moderate to rapid
- Diseases & Pests: Minimal
- Soil & Moisture: Well adapted for all
- Features: Beautiful unique flowers, overwintering pods, large heart-shaped leaves
Sweetgum – *Liquidambar styraciflua*

- Height & Spread: 60-75’ x 40-50’

- Growth Habit & Rate: Pyramidal → oval or rounded, moderate to rapid

- Diseases & Pests: Minimal

- Soil & Moisture: Well adapted for all

- Features: Brilliant fall color, star-shaped leaves, wildlife, needs space
White Pine – *Pinus strobus*

- Height & Spread: 50-80’ x 40-50’
- Growth Habit & Rate: Pyramidal, moderate to rapid
- Diseases & Pests: Minimal
- Soil & Moisture: Prefers well-drained upland soils, but adaptable
- Features: Planted extensively for ornamental, wildlife
European Larch – *Larix decidua*

- Height & Spread: 70-75’ x 25-30’
- Growth Habit & Rate: Spreading and vase-shaped, moderate to rapid
- Diseases & Pests: Minimal
- Soil & Moisture: Well drained soil, clay tolerant
- Features: Deciduous conifer, fall color, wildlife
Urban Species – Low Growing
Flowering Crabapple – *Malus sp.*

- Height & Spread: Varying
- Growth Habit & Rate: Varying
- Diseases & Pests: None - Minimal
- Soil & Moisture: Well adapted for all
- Features: Flowers in Spring, wildlife
  - ‘PrairiFire’
  - ‘Snowdrift’
  - ‘Sargent’
Serviceberry – *Amelanchier interior*

- Height & Spread: 15-25’ x 15-25’
- Growth Habit & Rate: Round, slow to moderate
- Diseases & Pests: None
- Soil & Moisture: Medium moisture, relatively tolerant of most
- Features: Red and gold fall foliage, white flowers, wildlife
Japanese Tree Lilac – *Syringa reticulate ssp. reticulata*

- Height & Spread: 20-30’ x 15-25’
- Growth Habit & Rate: Round, slow to moderate
- Diseases & Pests: Minimal
- Soil & Moisture: Moist well-drained
- Features: Tolerant of salt spray, lilac flowers in tree form, cherry-like bark, wildlife
Common Choke Cherry – *Prunus virginiana*

- Height & Spread: 20-30’ x 15-25’
- Growth Habit & Rate: Round, moderate to rapid
- Diseases & Pests: Minimal
- Soil & Moisture: Adaptable, prefers well-drained
- Features: Thin, delicate leaves, white spring flowers, edible blackish berries, wildlife
Dogwood – *Cornus sp.*

- Height & Spread: 15-30’ x 15-20’
- Growth Habit & Rate: Spreading, moderate
- Diseases & Pests: Minimal
- Soil & Moisture: Moist well-drained, acidic tolerant
- Features: Spring flowers, berries, attractive winter back, wildlife
Hawthorn – *Crataegus sp*

- Height & Spread: Varies
- Growth Habit & Rate: Spreading, slow to moderate
- Diseases & Pests: Minimal
- Soil & Moisture: Moist, well-drained
- Features: Unique leaves, spring flowers, wildlife
Eastern Redbud – *Cercis canadensis*

- Height & Spread: 20-30' x 25-35'
- Growth Habit & Rate: Round, moderate
- Diseases & Pests: Minimal
- Soil & Moisture: Well adapted for all
- Features: Pink/red flowers, heart-shaped leaves, wildlife
Questions & Discussion

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