TRAINING YOUNG TREES FOR STRUCTURE AND FORM

HORT 2241

Training young trees can:

- Improve structural stability and increase safety
  - -reduce damage to property
  - -reduce injury to people
  - -reduce liability

Training young trees can:

- Increases the trees longevity
  - Trees that are properly trained have greater chances of living longer than untrained trees

Training young trees can:

- Reduce maintenance cost
  - Less maintenance cost when trees are mature
  - Maintenance cost is less in trained trees because it requires less cabling & bracing of older trees and less need to thin canopy to reduce weight of older trees
  - Less equipment is needed
    - Only need hand pruners, loppers, saws, pole pruner, and ladder

Young Trees (decid/bdlf evgn.)

1. Remove broken, injured, diseased, dying or damaged branches behind the point of injury
2. Select a leader and remove or cutback competiting leaders. Select the strongest vertical stem.

The 5 Steps for Training Young Trees

3. Select and establish the lowest permanent branches and label.
   a. Look for:
      Strong attachment
      Avoid included bark
      Select one that is half or less than the main trunk diameter

The 5 Steps for Training Young Trees

3. Select and establish the lowest permanent branches and label.
   - Location of lowest permanent branch:
   - Sidewalk – 8ft.
   - Street – 14 ft.
   - Planting strip – 6-7 ft.
   - Parks and yards – varies depending on equipment use

The 5 Steps for Training Young Trees

3. Select and establish the lowest permanent branches and label.
   - Remove or shorten branches below permanent branches. If too small may have to wait

The 5 Steps for Training Young Trees

4. Select scaffold branches (main branches) and cut back or remove competiting branches
   - a. Base selection on strong attachment, strong branches, vertical and radial spacing
   - b. Radial branching gives the tree good balance and form
   - c. Vertical spacing
   - Large trees – space branches 18 inches apart
   - Small trees – space branches 12 inches apart

The 5 Steps for Training Young Trees

- Select temporary branches below the lowest permanent branch. Remove or shorten the length. Leave 2 to 3 buds.
  - May have to leave temporaries which:
    - Increase photosynthate
    - Shade the trunk
    - Reduce the risk of tree damage due to vandalism
    - Control branch growth

How much to prune?

- Generally, no more than 25% of the canopy should be removed within a year
- Removal of 5 to 10 % of the canopy is sufficient

How much to prune?

- If growth is slow or tree in poor growing conditions, then remove less than 25% of the canopy
- If tree has significant defects or is vigorously growing, then can remove more than 25% of the canopy. May just have to shorten lateral branches.

When to prune?

- In the south the best time is between December and February for most species
- Pruning can be done at the latest when buds swell and are ready to break.
- Pruning in the growing season should be kept to a minimal (less than 10%)

After initial pruning what to do next year and subsequent year?

- Continue to follow 5 steps process

Species growth form and response

- Tree forms varies
  - Need to know habit of growth of trees
  - Their growth rate
  - Etc.

Locations

- Lowest permanent branch should be located depending on location of tree
- Street trees for vehicles – 13-14 ft. over street
- Pedestrian (sidewalks) – 8-9 ft. over walk
- Planting strips – depends on people and equipment – generally 7-8 ft. above ground
- Yards or open lawns – lowest clearance for people and equipment – generally 7-8 ft. above ground

Pruning Conifers

- Some modifications are made for the 5 step process
  - Step 1 applied as before
  - Step 2 very important to apply
  - Step 3 lowest permanent branch is applies
  - Step 4 not as important – may bypass this step – make sure to inspect branch attachment